The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1742.—Vol. XXXIX. LONDON, SATURDAY, JANUARY 9, 1869. {STAMPED ....SIXPENCE, UNSTAMPED..FIVEPENCE

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 1842.)

Mr. CROFTS transacts business in the way of PURCHASE or SALE of every description of stocks, but particularly BRITISH MINES, at net prices. All orders meet with the utmost punctuality, and advice given as to the nature and eligibility of INVESTMENTS when required.

HOLDERS of mining shares difficult of sale in the open market may find purchasers for the same through Mr. CROFTS' agency. Also parties requiring advice how to act in the disposal or abandonment of doubtful mining stocks may profitably avail of Mr. CROFTS' long experience on the market in all cases of doubt or difficulty, legal or otherwise.

*** Capitalists may hear of an INVESTMENT to pay upwards of 80 per cent. per annum by applying to Mr. CROFTS.

MR. JOHN BUMPUS, 44, THREADNEEDLE STREET, has FOR SALE the following shares, free of commission :—

75 Anglo-Brazil., 12s. 3d	30 E. Grenville, £3 13 9d	15 So. Darren, 33s. 9d.
50 Australian United (Gold), 27s. 6d. pd., 29s.	100 Frontino (Gold), 10s.	25 So. Condurrow, 16s 9d
	25 Frank Mills, £3⅛.	10 Tincroft, £18.
	70 Gen. Brazilian, 8s. 3d.	50 Taquaril, 11s. 6d.
30 Brynpostig, £13¼.	5 Great Laxey, £19⅜.	5 W. Chiverton, £59¾.
5 Cwm Erfin, £16¾.	10 Gt. Wh. Vor, £10¾.	5 W. Rose Down, £9¾
25 Chontales, £2¼.	10 Marke Valley, £9.	50 W. Prince of Wales, 7s
50 Chiverton, £3⅜.	15 North Crofty, 27s. 3d.	20 Wh. Grenville, 34s. 9d
50 Carn Camborne, 10s 3	35 No. Treskerby, 18s. 6d	100 Wheal Ida (£1 6s. 6d. paid), 2s.
50 Don Pedro, £4.	25 New Wh. Lovell, 44s 3d	
45 Drake Walls, 16s. 6d.	50 Prince of Wales, 24s.	2 Wheal Seton, £67.
10 East Caradon, £8⅛.	100 Princess of Wales, 3s 9	15 Wh. Uny, £3 16s. 3d.

MR. WILLIAM WARD,
STOCK AND SHAREDEALER,
No. 29, THREADNEEDLE STREET, LONDON, E.C.

MESSRS. WILSON, WARD, AND CO.,
STOCK AND SHAREDEALERS,
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.

MR. THOMAS SPARGO, STOCK AND SHAREDEALER,
224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

JOHN RISLEY, (SWORN) STOCK AND SHAREBROKER, 48, THREADNEEDLE STREET, LONDON, E.C.
Bankers: London and Westminster, Lothbury.

OFFICE OF THE
WHEAL MARY FLORENCE MINING COMPANY (LIMITED),
74, OLD BROAD STREET, LONDON.

MR. JAMES HUME, STOCK AND SHAREDEALER,
74, OLD BROAD STREET, LONDON, E.C.
Orders in the following shares are requested :—

Wheal Mary Florence.	Chiverton, £3¼.	Drake Walls, 15s.
Prince of Wales, 24s.	Wheal Uny, £3⅞.	No. Treskerby, 17s. 6d.
East Caradon, £8.	East Grenville, £3¾.	Don Pedro, £3¼ prem.
South Condurrow, 18s.	Grenville, 35s.	Chontales, £2¼.
	Crebor, 9s.	

Mr. HUME specially recommends Wheal Mary Florence shares and several others likely to have a great rise in price.
Buying and selling orders executed on the closest margins.
Bankers: The London Joint-Stock Bank.

MR. J. H. COCK, STOCK AND MINING SHAREDEALER,
74, OLD BROAD STREET, LONDON, E.C.
Fifteen years' experience in Cornwall and London.
BUYER or SELLER of South Condurrow, North Treskerby, Margaret, Rosewall Hill, Chiverton, and every other description of mining shares, at close market prices.

MR. E. J. BARTLETT, STOCK AND SHAREDEALER, No. 30, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS in West Godolphin, Summer Hill, North Pool, South Condurrow, Bryn Gwiog, Wheal Agar, Great Vor, South Merllyn, North Treskerby, and New Lovell.
For immediate purchase, South Merllyn shares are recommended, as, from the report of the agent published to-day, little doubt can exist but that the mine will soon enter the Dividend List.

NOTICE OF REMOVAL.

MR. JOHN MOSS, STOCK AND SHAREDEALER,
begs to say that he has REMOVED to—
ST. MICHAEL'S CHAMBERS, 42, CORNHILL, E.C.
BUYER and SELLER of all descriptions of British and Foreign Mines at close market prices.
SPECIAL BUSINESS in North Treskerby, Prince of Wales, Caldbeck Fells, Frontino, and Chontales.
Bankers: City Bank, Finch-lane, E.C.

Established Fifteen Years.

MESSRS. WARD AND JACKMAN,
STOCK AND SHAREDEALERS,
No. 1, CUSHION COURT, OLD BROAD STREET, CITY, E.C.
Messrs. WARD and JACKMAN have daily information from the principal seats of mining, which is at the service of those who may honour them with their confidence.
Jan. 8. Bankers: London and Westminster, Lothbury.

MR. C. A. POWELL, STOCK AND SHAREDEALER,
No. 1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.
BUYER or SELLER of shares in all mines currently dealt in, at a margin on the market price of the day.
SPECIAL BUSINESS in Frontino, Taquaril, Don Pedro, Sao Vicente, General Brazilian, Chontales, Caldbeck Fells, Prince of Wales, and North Treskerby.
References exchanged.
Bankers: City Bank, Finch-lane, E.C.

WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, LONDON, E.C., DEALS in all STOCKS AND SHARES, either for cash or the fortnightly settlement.
SPECIAL BUSINESS in the following Gold Mines :—

Don Pedro.	General Brazilian.	Frontino and Bolivia.
Taquaril.	Rossa Grande.	Chontales.
Port Phillip.	Anglo-Brazilian.	

Bankers: The Alliance Bank.

MR. WILLIAM SEWARD, STOCK AND MINING SHARE BROKER, 19, THROGMORTON STREET, LONDON, E.C.
Every description of shares BOUGHT and SOLD at the best market prices.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S, BISHOPSGATE STREET, LONDON, E.C. (Established 14 years), has FOR SALE the FOLLOWING SHARES, at net prices :—

20 Brynpostig, 30s. 6d.	20 Frank Mills, £3⅜.	50 So. Condurrow, 17s.
3 Cwm Erfin, £16⅞.	20 Gt. Retallack, £2 13 9	100 Taquaril, 4s. 3d. pm.
10 Chiverton Moor, £5⅞	5 Great Vor, £10¾.	50 Tamar Valley.
20 Chiverton, £3¼.	50 Glan Alun, 12s.	300 Val Antigoria, 20s.
10 Chiverton Val., £3⅛.	100 Gen. Brazilian, 8s.	1 West Chiv., £59¼.
30 Chontales, £2 3s. 9d.	30 Great No. Laxey, 13s 6	50 West Godolphin, 21s.
25 Don Pedro, £3 3s.	10 Marke Valley, £8 16 3	1 Wheal Seton, £67.
50 Drake Walls, 15s. 9d.	50 No. Treskerby, 17s 6d	30 Wheal Grenville, 34s.
10 East Caradon, £8 1 3	20 New Lovell, 43s. 6d.	1 West Frances, £41.
5 East Lovell, £9 6s 3d.	40 Prince of Wales, 22s	20 Wh. Kitty (St. Agnes)
30 E. Grenville, £3¼.	50 Pestarena, 31s. 3d.	£4 1s. 9d.
50 Frontino, 8s. 9d.	20 So. Merllyn, 20s. 6d.	10 West Caradon, £3.
	30 South Darren, 33s.	

MR. GEORGE BUDGE, STOCK AND SHAREDEALER, No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 20 years), is a SELLER at net prices of :—40 Cwm Erfin ; 100 Glan Alun, 13s. ; 15 West Caradon, £3¼ ; 35 Wheal Crebor, 6s. 9d. ; 70 Great South Chiverton ; 40 South Condurrow, 17s. 6d. ; 3 West Chiverton, £60 : 10 North Roskear, £7¾ ; 80 North Jane, 7s. 6d. ; 30 Prince of Wales, £1⅛ ; 20 South Herodsfoot, 25s. ; 20 Rose and Chiverton United ; 2 Devon Great Consols ; 2 Minera, £180 ; 80 West Kitty ; 3 West Frances, £40¾ ; 40 North Treskerby, 12s. 9d. ; 110 West St. Ives ; 70 Royalton ; 5 Wheal Buller, £6⅝ ; 25 New East Wheal Lovell, 8s. 3d. ; 100 Lovell Consols ; 50 Anglo-Italian.
BUYER of 400 West Wheal Kitty, 250 Royalton, and 100 Gawton.

CORNISH AND FOREIGN MINES—TO SHAREHOLDERS AND OTHERS.
PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, Jan. 8, No. 514, Vol. XL., price 6d. each copy, forwarded on application, contains information on the following mines :—

Chiverton.	Anglo-Brazilian.	East New Lovell.
West Caradon.	Pestarena:	Don Pedro.
St. John del Rey.	New Wheal Lovell.	Rossa Grande.

With Particulars of the Recent Advance in the Price of Tin, Table showing the Variations in the Copper Standard during the Past Year, Statistics of the Metal Markets for Copper and Tin, &c., &c.

INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to *bona fide* investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.
PETER WATSON, STOCK AND SHAREDEALER,
79, OLD BROAD STREET, LONDON
(three doors only from Hercules-passage, entrance to the Stock Exchange).
Twenty-four years' experience.
(Two in Cornwall and Twenty-two in London.)
Bankers: The Alliance Bank, and the Union Bank of London.
References given and required (when necessary) in all the principal towns of the United Kingdom.

THE LONDON DAILY RECORD—STOCK AND SHARE LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, £1 1s. ; by post, £2 5s. ; monthly subscription—by post, 4s. ; single copy, 1d. ; by post, 2d.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

MR. EDWARD COOKE,
STOCK AND MINING SHAREDEALER, 76, OLD BROAD STREET (and Mining Exchange), LONDON, E.C.
Mr. COOKE is now in Cornwall, and will return on Thursday next, when he will be able to furnish important particulars respecting the mines he is now visiting. References given.
Price-list sent free on application.
Bankers: Alliance Bank.

MR. W. H. CUELL,
No. 42, CORNHILL, LONDON, E.C.

MATTHEW GREENE, STOCK AND SHAREDEALER,
1, ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.
I recommend my clients and the public to read the reports in this day's Journal of New Clifford and Tamar Valley Mines, both of which are safe to prove first-rate speculations, and are probably two of the best progressive mines in Cornwall or Devon.

BARTLETT AND CHAPMAN'S "INVESTMENT CIRCULAR AND FINANCIAL RECORD"
(Published on the first Wednesday in each month)
Comprises—A Comprehensive Review of the Stock, Share, and Money Markets ; an Enumeration and Comparison of the Whole Circle of Investments ; and Valuable Suggestions for Purchase or Sale.
*** Sent free on application.
No. 2, Bucklersbury, London. E.C.

MR. T. ROSEWARNE, 81, OLD BROAD STREET, LONDON, E.C.
T. R. has BUSINESS in the following mines, at close market prices :—

Bedford United.	Great Wheal Vor.	West Chiverton.
Chiverton Moor.	Marke Valley.	Wheal Grenville.
East Caradon.	Prince of Wales.	Wheal Seton.
East Grenville.	Tincroft.	

An OFFER WANTED for 70 West Prince of Wales, 160 Princess of Wales, 110 West Drake Walls, 90 Frontino and Bolivia, 300 Great South Chiverton, 155 East Carn Brea, 170 Tamar Valley, 130 North Downs, 100 Wheal Courtney, 60 Great North Laxey, 30 North Wheal Chiverton, 28 Clifford, 100 West Kitty, 70 Pedn-an-drea, and 100 Old Gunnislake.
T. R. is in a position to recommend several progressive mines that are safe for a great rise during the coming year. Having had these mines inspected by competent agents, and having also inspected them myself, and from my practical knowledge of mining in all its branches, I have great confidence in recommending the mines I have selected for an advance in price. Those who have acted upon my advice during the last twelve months have no reason to complain ; and I never saw a better opportunity offered for making money in mining than the present.
Money advanced to any extent on good mining shares.
Office hours Ten to Four. Bankers: Bank of England.

MR. JOHN GIBBS (late LANE and GIBBS), 2, ROYAL EXCHANGE, LONDON, E.C.
MARKE VALLEY, EAST CARADON, WEST ROSE DOWN, and CARN CAMBORNE MINES.—Although difficult to effect transactions in these mines at times on the Mining Market the advertiser is always in a position amongst his correspondents to buy and sell at close prices, and does not hesitate to recommend a purchase in each and all of the above for a great advance in price and large dividends.
GREAT LAXEY and SOUTH DARREN. SPECIAL BUSINESS in these mines.
Bankers: London and County Bank.

MR G. D. SANDY, STOCK AND SHAREDEALER, No. 48, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the following shares at net prices :—

25 Chiverton, £3⅜	20 Frank Mills, £3⅜.	5 Tincroft, £17⅜.
10 Chiv. Moor, £5 13s 9d.	5 Great Vor, £10¾.	55 Tamar Valley.
5 Cook's Kitchen, £13¼	15 Marke Valley, £8 18 6	3 W. Chiverton, £58¾.
10 Great Laxey, £19⅜.	20 New Lovell, £2 2s.	20 Wheal Uny, £3 13s.
50 Drake Walls, 15s. 9d.	30 North Crofty, 25s. 9d.	50 Chontales, £2 3s. 9d.
5 East Caradon, £8 3 9	40 No. Treskerby, 17s 6d.	50 Taquaril Gold.
10 East Lovell, £9⅜.	50 Prince of Wales, 22s 3	35 So Condurrow, 17s 6d

Mr. SANDY recommends the immediate purchase of Tamar Valley, New Clifford, and East Caradon shares.

THE MINING INVESTORS' ASSOCIATION.
For the PURPOSE of COLLECTING and DISSEMINATING TRUTHFUL INFORMATION on all MATTERS RELATING to the WORKING as well as the FINANCIAL MANAGEMENT of MINES.
To PURCHASE and SELL MINING STOCK of every description.
To MAKE ADVANCES, at a moderate rate of interest for short periods, upon MINING STOCKS having a market value.
The services of some of the most truthful and experienced Inspecting Agents have been specially retained for this Association.
References to bankers and others given.
THE ASSOCIATION DOES NOT QUOTE SHARES AT FIXED PRICES, but they have SPECIAL BUSINESS to transact in the following stocks :—
GOLD MINES.
Chontales, Pestarena, Don Pedro, General Brazilian.
TIN MINES.
East Lovell, Great Vor, Providence, and Wheal Kitty (St. Agnes).
COPPER.
Prince of Wales, Clifford, West Seton, Prosper United, Marke Valley, East Caradon, and North Treskerby.
One or two selected mines can be named that will, probably, double their present price within the next six months.
Address,—THE MANAGERS, at the Office of the Association, 26, Nicholas-lane, Lombard-street, E.C.

INVESTMENT, LOAN, AND BANK AGENCY.
Established 1839.
PUBLIC SECURITIES of every description Bought and Sold upon advantageous terms. Facilities for payment, and every reliable information afforded to Investors.
LOANS granted, for one year or any shorter period, on Stocks and Shares having a market value.
Five per cent. interest allowed upon DEPOSITS of all amounts.
Money and Finance Agency Business generally undertaken.
RICHARD TAYLOR AND COMPANY.
No. 12, Clement's-lane, Lombard-street, London, E.C.

MR. T. P. THOMAS, MINING AGENT AND AUCTIONEER,
77, OLD BROAD STREET, LONDON,
Having been lately engaged in the management and inspection of mines and collieries, begs to inform his friends and the public that he has now resumed his London business, in the exclusive capacity of an agent.
Possessing 26 years' experience of the London Mining Market, with a practical knowledge, from personal inspection, of the chief mines in Devon, Cornwall, North of England, Wales, and Isle of Man, T. P. THOMAS is in a position to give correct information and advice to those who may favour him with their commands.
T. P. THOMAS is prepared to execute commissions in the purchase and sale of Shares for cash, or the usual fortnightly settlement.
Mines inspected and reported upon at the usual charge. A list of market prices on application.
T. P. THOMAS has instructions to SELL FORTY SHARES in a TIN MINE, and TWO SHARES in a COPPER MINE, that he can safely recommend, as they are about to resume dividends.

MR. CHARLES THOMAS,
MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,
3, GREAT ST. HELEN'S, LONDON, E.C.

Third Edition, price One Shilling ; post-free, fourteen stamps,
MINING FIELDS OF THE WEST :
A PRACTICAL EXPOSITION OF THE
PRINCIPAL MINES and MINING DISTRICTS of CORNWALL and DEVON.
Published by CHARLES THOMAS,
At No. 3, Great St. Helen's, London, E.C.

ESTABLISHED SEVENTEEN YEARS.
GRANVILLE SHARP AND CO.,
SHAREDEALERS, 32, POULTRY, LONDON, E.C.
Bankers: London and Westminster Bank, Lothbury, London, E.C.
SPECIAL BUSINESS in the following Mines at the closest market prices :—

Chiverton Moor.	Great Wheal Vor.	West Chiverton.
Dolcoath.	Herodsfoot.	West Wheal Seton.
Devon Great Consols.	Lovell Consols.	Wheal Trelawny.
East Wheal Lovell.	Marke Valley.	Wheal Uny.
East Trumpet.	Nangiles.	Wheal Seton.
East Caradon.	Providence.	Wheal Basset.
1 East Pool, £377¼.	Prince of Wales.	Wheal Mary Ann.
East Grenville.	South Condurrow.	Wheal Chiverton.
East Chiverton.	South Caradon.	Wheal Grenville.
Great Laxey.	Tincroft.	Wheal Agar.
Great South Chiverton.	Trumpet Consols.	Wheal Jane.

Stocks and Shares BOUGHT and SOLD at the closest market prices net.
N.B.—It is quite impossible to quote prices in an advertisement, as they may vary daily. Reliable information given to shareholders and intending investors.

Established Twelve Years.—Twenty-four Years' Experience.
MR. F. W. MANSELL, 44, THREADNEEDLE STREET, LONDON, E.C., recommends the IMMEDIATE PURCHASE of the following shares :—

East Caradon.	Tamar Valley.	South Condurrow.
Great South Chiverton.	Drake Walls.	Wheal Mary Ann.

EAST CARADONS have advanced £5 per share since I first advised the purchase. This is but a commencement, a rise of many pounds is sure to follow within the next three months. Special information may be had on application to Mr. F. W. MANSELL.
TAMAR VALLEY.—No time should be lost in the purchase of these shares. All the promises held out of this mine will be more than fulfilled.
Bankers: London Joint Stock Bank.

MR. THOMAS THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.
ROYALTON.—The steady increase in the price of tin is causing a great demand for shares in legitimate tin mines, and which, there can be little doubt, will become generally valuable. Investors, however, should be careful how they place money in deep and expensive mines, which can only pay profits with tin at high prices. They should rather seek an investment in those mines which, with extensive reserves, can pay profits with tin at its lowest price. Among the best of this latter class I place Royalton, and recommend the purchase of the shares wherever they may be met with. At their present price they are intrinsically very cheap indeed.

MESSRS. A. STUART AND CO., STOCK AND SHAREDEALERS, 93, BISHOPSGATE STREET WITHIN, LONDON, E.C., have FOR SALE, free of commission, for cash or account :—30 Great Laxey, £20 ; 25 Lovell Consols, 8s. 3d. ; 20 East Carn Brea, 11s. ; 20 Don Pedro, £3⅞ ; 40 Frontino, 9s. 6d. ; 30 North Treskerby, 17s. 3d. ; 3 West Chiverton, £60 ; 20 East Chiverton, £1¾ ; 50 Prince of Wales, 24s. 9d. ; 100 West Kitty, 5s. 3d. ; 20 Glan Alun, 12s. 6d. ; 5 Great Rhosesmor, £2⅝ ; 50 Rossa Grande, £1¼ ; 100 Sao Vicente, 14s. ; 100 West St. Ives, 3s. 6d. ; 40 South Condurrow, £⅞ ; 20 New Lovell, £2¼ ; 7 Great Vor, £11 ; 2 East Lovell, £9⅜ ; 50 Taquaril, 3s. 9d. ; 50 Royalton, 28s. 6d. ; 100 General Brazilian, 8s. ; and 20 West Godolphin, £1⅛.

MR. J. R. PIKE has FOR SALE the undermentioned SHARES at the following net prices :—

5 Bronfloyd, £17¼.	50 Caldbeck Fells, 11s.	15 North Levant, £10⅛.
10 Cook's Kit., £13 6s 3d	20 Chiverton Val., £3¼.	20 North Crofty, £1 3s9.
5 Great Vor, £10½.	50 East Reeth, £1.	50 Tamar Valley.
2 Herodsfoot, £42½.	50 Glan Alun, 10s. 6d.	25 Wh. Grenville, £1 3s9d
2 South Frances, £14¾.	50 Great N. Laxey, 8s.9d	10 Wheal Kitty, £3 8s.9d
15 Tincroft, £17¼.	4 Nangiles, £6¼.	20 So. Condurrow, 16s.6d
25 Bedford United, £13¼	20 New Lovell.	

Mr. PIKE has a FEW SHARES FOR SALE in a mine that cannot fail to advance greatly from the present price. Full particulars may be had on application to No. 3, Crown Chambers, Threadneedle-street, London, E.C.

MR. HENRY MANSELL,
44, THREADNEEDLE STREET, LONDON, E.C.
Refers with satisfaction to the advice given to his friends regarding EAST CARADONS, which are now at £8⅛ to £8¼ buyers, and will still advance ; and PRINCE OF WALES, which are now selling at 22s. 6d., and will go lower.
CHIVERTON MOOR.—H. M. has just had this mine inspected by a competent agent, and advises the immediate purchase of shares, which will double their present price in a few months.
TAMAR VALLEY and GREAT SOUTH CHIVERTON are both looking well, and should be bought for a good rise.
Thirteen Years' Experience.
Bankers: London Joint-Stock Bank.
References exchanged.

THE OLD YEAR AND THE NEW.
Now ready,
MR. J. B. REYNOLDS' "CIRCULAR," which contains—Particulars of Markets, Past and Future—the Position of the Metal Markets, Lead and Tin, as compared with Copper Mines—and other matters of great importance to the Investor.
To be had on application to Mr. J. B. REYNOLDS, Ethelburga House, Bishopsgate-street Within, London, E.C.

INTENDING INVESTORS.—The "FINANCIAL GAZETTE," published by Mr. Y. CHRISTIAN, should be consulted with a VIEW to the SAFE EMPLOYMENT of CAPITAL. It contains Original Articles, a Review of the Money Markets, and a selection of investments paying 10 to 17 per cent., and such information as is necessary to guide intending investors.
6, Bond-court, Mansion House, London, E.C.
Bankers: Bank of England.

INVESTORS IN MINING COMPANIES.—Mr. CHRISTIAN recommends the immediate PURCHASE of NORTH LEVANT SHARES, whether bought to hold as an investment or to sell again. It is a splendid property, and dividends are close at hand. Although Mr. CHRISTIAN is the only person publicly recommending the purchase of shares in this sett, he does so with the greatest of confidence, feeling assured that those who buy now will do well.

CORNISH TIN MINES.—Before investing in ROYALTON, get full information about EAST ROYALTON, from
T. A. MUNDY AND CO., 38, BISHOPSGATE STREET WITHIN ; or
W. HANNAM AND CO., 449, STRAND.

CHONTALES GOLD COMPANY.—FULL PARTICULARS of the DIFFERENT CLASSES of SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austinfriars, E.C.

The Royal School of Mines, Jermyn Street.

MR. WARINGTON SMYTH'S LECTURES.

[FROM NOTES BY OUR OWN REPORTER.]

LECTURE XVI.—We have been discussing (said Mr. SMYTH) in the last three lectures the means of boring to considerable depths for the purpose of testing the ground, and we have seen that boring is capable of being applied to many other useful purposes within the mine itself, in explorations, and with a view to protect the miners from being overwhelmed by hidden reservoirs of water. We now proceed to take that portion of our course which deals with the means at our command for breaking ground for the purpose of opening out excavations of one sort or another, whether in exploring or working away the minerals required. In most cases the implements have the same character, whether the mine is opened by dead work and long galleries, or whether the minerals are obtained in great quantities by exploitation on a large scale. The first point to be considered is the resistance offered by the nature of the ground to the labour of the miners. On commencing operations at the bottom of a pit or shaft the miners begin to open drifts or horizontal galleries, of moderate dimensions, large enough to stand upright in and walk through, with plenty of room on both sides. These are usually run in pairs, with openings cut through from one to the other, so as to establish a current of air for ventilation. In these works the question of resistance comes into play, and, of course, there are considerable variations in this respect, occasioned by the comparative hardness of different classes of rock. The term hardness, however, is used by the miners in reference rather to the difficulties of the ground than its absolute hardness, in the ordinary sense of the word. Thus, it is not always the hardest rock, taken in the ordinary sense, that is the most costly to make our way in. This will depend upon a variety of circumstances connected with its physical condition. Thus, in one place the same rock may be compressed, as it were, and its particles compacted together more densely than in another place. One sandstone may be quite friable, as if its materials were not well cemented together, while another is strongly adhesive, and difficult to make any progress through. Again, we may have a material composed of hornblende, perhaps, which is considerably softer than quartz or gritstone, and yet, in consequence of the toughness of the entire mass, and from the absence of joints, it may be very difficult to work. Again, we may have a rock composed of hornblende and felspar, and then one merely of quartz, and much harder, and which presents difficulties of another kind. We must, therefore, carefully examine the rocks we have to deal with, in order to form a true judgment of the difficulties to be expected in driving through them, and the expense at which they may be worked. It is, as I have said, not always the hardest rocks which are the most difficult, as some of them are often in a remarkably friable state. Thus, we may get hornstone, a tough variety of quartz, full of fissures or openings of that sort which would give the miners an advantage in working it. If, however, we attempt a classification of the different kinds of ground, we may divide them into several groups, according to their physical or geological condition, viz.:—

1.—What the miners term "easy or loose running" ground. It is called "running" from the fact that if you dig out some of it the remainder is so mobile that it will run down just as a liquid would. These kinds of grounds give an amazing amount of trouble in any attempts to drive through them. Some, for instance, as those found in beds belonging to the Permian formation, in sinking to the famous deposits of salt in Prussia and Saxony. These are so soft that if it were attempted to sink a shaft without special care and the strongest tubbing the sides would run to the bottom like quicksand; indeed, they may be called subterannean quicksands. Again, in the magnesian limestone districts of Durham it has been found in sinking for coal beneath a cover of that later formation a loose material of this kind rushes in like water, and exercises such a pressure that it is with difficulty the workings can be carried through it. There are several cases in this district where within the last few years an enormous amount has been spent in steam-engines and apparatus of various complicated kinds to keep out the quicksand, and, although it is only a single bed of a few feet in thickness, it has cost more time and money than the whole of the rest of the sinking. In the same way in Belgium and Westphalia, where the chalk is not far beneath the feet, and below the chalk, they come at once to the coal measures, and it frequently happens that the last layer of sand under the chalk formation gives as much difficulty as that in the magnesian limestone I have just mentioned. This happens over large tracts of Europe, and the miners are so practised in the art of dealing with them that it is seldom they have to record a total failure, though some years ago it was not an unfrequent circumstance for a few feet of running ground to overcome all the efforts of the miners. I have hitherto alluded to sinking, but the same thing occurs in driving levels. Supposing in this work you come to what has been formerly the bed of an ancient stream; you would find that it had been filled in with loose sands, which forms a passage for the water from adjacent beds. As soon as you cut into a piece of this sort the sand and water rush into your drift, and you find, with a deposit of only a few feet in thickness, a difficulty so great as to occasion an infinite amount of expense and danger, and perhaps the abandonment of the whole work. Even in districts which are not intersected with the beds of ancient streams obstacles of this kind frequently occur, and the engineer should, therefore, be well acquainted with the best modes of overcoming them. There are cases in Cornwall where tin mines have been opened in the granite, portions of which have been found so soft—as, for instance, where the felspar takes the form of china-clay—that the miners cannot tread upon it without sinking in, and planks have to be laid along the floor. When this is the case the miner often comes to places where a still softer material rushes in in considerable quantities upon him, so as to make it difficult to carry the drift horizontally, and nothing remains but to secure it strongly by heavy and close timbering before the level can safely pass through. When granite is in this soft state it is called by the miners "pot" or "plum" granite, and the instrument used in dealing with it, although of the shovel kind, is of the nature of a scraper. Great care must be taken not to remove more than is necessary, because if that be done the side of the excavation will soon become in a very dangerous condition. Thus, the mere removal of the material often brings into play an extraordinary amount of labour and the exertion of much skill to keep the work secure from accidents.

2.—What miners called "fair" ground, in contradistinction to "running" ground. This may be extracted with great facility, and will leave walls, &c., which will stand pretty well, but which would be unsafe to remain unsecured for any length of time. It may be hewn out with pointed tools, or dug out with shovels, but as soon as the air acts upon the mass it will break away. Some rocks of this class often have in them portions or nodules, as it were, of harder ground, which are particularly dangerous, as they are liable to break out from their nest or bed, often under circumstances likely to give trouble, from the side of a shaft. When this sort of rock has to be dealt with it is necessary, therefore, to employ more timber than otherwise might be necessary for safety. Thus, certain shales in the coal measures contain large nodules, which might have been the stems of trees turned into ironstone, which are extremely likely to break through, and crush the miners at work beneath. And so when certain porphyries are decomposed and in a softened or clayey condition, but containing in them lumps of this kind, the latter are given to fall away in like manner. There are other cases of this kind, in which great precaution is necessary. Many descriptions of material are called "fair" ground. For example, in certain seams of coal, where the roof and sides stand well, and often need little propping. Rock-salt is a formation of this kind, and passages and galleries are driven through it for miles; but chemical and other influences act with more or less rapidity, and it often happens that a slight timbering put in at a critical juncture may save life, or, at least, the necessity of boring hereafter to put in heavier timber. Again, granite is sometimes soft enough to be cut with the pick alone, and that too in close proximity to places where the same rock is so hard as to require gunpowder for every inch of progress made.

3.—A third class will be formed of rocks of a harder description, which are of a jointy or scaley character, and these, although hard, are worked with facility, the introduction of the point of the pick enabling the miner to force large masses down. All these three divisions are worked with simple tools, such as the pick, hammer, and wedge.

4.—We next come to works of a harder description, and free from cracks and joints, called by the German miners "fest," and by the English "shooting" ground, because it has to be attacked by gunpowder, and can only be broken by that or similar means. There boring and blasting come into play—as, indeed, it does with the hardest varieties which we have.

5.—We will, therefore, make one more division, to include extraordinarily hard ground, in which are to be found rocks so expensive to work that, unless the mine happens to be extremely rich, it is impossible to continue the work, and make it remunerative. Imagine the case, for instance, of elvans so hard that it costs 80*l.* to carry a horizontal gallery 6 ft. into it. I know a case in the North of England where such a work cost between 30*l.* and 40*l.* per fathom, and where in eight hours the workmen would blunt 60 or 70 of the best steel borers that could be obtained. This is a sort of ground to be avoided as much as possible; but there are cases on the Continent in which it is profitably worked by means of what is called "fire-setting."

So much for the different kinds of ground, and now as to the implements to be used in its removal. In the softest ground, where the work is simply that of shovelling it out of the way, or into kibbles, or whatever the vessel may be called, as in the work of mining itself, various kinds of spades and shovels are employed, either underhanded or overhanded. In the West of England they use a shovel with a very long handle, and with such dexterity that a Cornish miner will do an amazing amount of work in a short space of time. In the coal districts different sorts of shovels are used, according to the locality. On the Continent the material is scraped to the person at work, instead of being put from him as in England, and you will see in the model-room quite a collection of shovels for this mode of working, from Saxony and elsewhere. There is a class of mining called "stream works," in which gold and tin are obtained. Of these, our own tin works fall into insignificance compared with those in Australia and other transatlantic regions, where the number of men employed may be reckoned by thousands. The implement used is a fork or shovel, into which the debris is taken up, and being passed under a fall of water and shaken the small drops through, leaving the larger stones on the shovel, this division being an important part of the work to be performed. In soft or easy, or, as it is termed, "mild" ground, the pick will have to be employed. This is a most important implement, used by miners in every country, but of which there is an amazing variety. The ordinary Cornish pick is shaped so that it may be used as a wedge and lever, while the square end of the head may be used as a hammer. The head is usually about 15 in. long, and the hilt about 2 ft. or 2 ft. 2 in. The head and hilt are not set at right angles, for the miners have an idea that the angle should vary according to the hardness of the ground. The handle, or hilt, should be made of a tough sort of wood, such as ash, and the head of a good class of iron. In metalliferous mines it is the simplest and most important implement employed, and it there varies in weight according to the ground to be dealt with; but 3 lbs. or 4 lbs. are the most common weights, or occasionally 5 lbs. If heavier they are found difficult to work laterally or upwards, but in working downwards a pick with a 10-lb. head is often used. Having exhibited examples of these and other English picks, Mr. SMYTH said that another variety worthy of note is the Saxon one, which is exactly like that used in getting the anthracite coal in Pembrokeshire. In Silesia, where the material dealt with is tolerably soft, the end of the pick is broadened, so as to form a kind of blade. In some mines the point of the pick wears away more rapidly than in others, and then it is not unusual to have a double-pointed pick; but, as a rule, in Cornwall, in Derbyshire, and in the North of England, the single-pointed pick is held to be the most convenient for working in lodes and where they have to use the poll of the pick as well as the point. The double-pointed pick is essentially the main tool of the collier, but it varies exceedingly in form, principally in obedience to the fancies of the men, but frequently with a view to the peculiarities of the beds to be cut. Thus, the first thing in attacking a face of coal is to "hole" or "undercut" it. Supposing the seam to be 5 ft. thick, with clay beneath and shales above, the collier, lying on his side, cuts with his pick a narrow, and perhaps horizontal, opening beneath the seam. This is an operation which requires a good deal of skill and caution, and it requires a few years actual working to acquire that skill. This is carried out by the "holing-pick," called also a mandrell or maundrell, or, in some places, a pike or slitter. It is double-headed, and has an extra length of handle, and, lying on his side, the "holer" will use it with great effect, and often cut in horizontally for 3 ft., or even more. It is in this work that the greatest sacrifice of life in the mines is incurred. The men who ought to prop up the superincumbent mass defer doing so as long as they can, in order to save their time, and large fragments are apt to break away suddenly, and crush whoever may be so unfortunate as to be beneath. A very slight prop would be sufficient in most cases to prevent this, and in 99 cases out of 100 the accident is due to carelessness. The handles of these picks are from 27 in. to 30 in., and in South Wales 34 in. long. The "holing" being completed, the miner next proceeds to shear the coal—that is, to cut it down vertically, the cut being a few inches wide, and heavier picks are employed for this purpose in many districts, particularly in the collieries of the Newcastle district and in the North of England. Some of the most curious picks probably are those of the Box Tunnel stone quarries. The stone is soft enough to allow it to be holed very much as if it were coal, but, as it has to be got in vast blocks, the holing is carried to a much greater depth, to allow of the introduction of the saw, and the handles of the picks are from 5 ft. to 6 ft. long, with very light heads. The men in working with these implements adopt a rather peculiar system. When they have delivered the blow they drop their pick, and draw it towards them. In their hands, however, it is very effective. The French and Westphalian picks differ considerably from all those I have referred to; but, as a general rule, they are of the two-pointed type. Our Cornish miners drive into the interstices of the rock, and then use their picks like levers. They break away considerable masses, and, being strong-armed men, do wonders in this way; but in the mines of Saxony and the Hartz there is no ground at all fissured or scaly, and the work there has, consequently, to be done by employing hammers and wedges. The Saxon miner in descending to his work takes with him a whole series of wedges, of different sizes. The wedge, or, as it is there termed, the "gad," is also used in Cornwall when the nature of the rock requires it. These two methods are those principally used even now, although the introduction of gunpowder has given great facilities in dealing with masses of rock on a large scale. Another variety of pick is employed in the extreme west of Cornwall, where the lodes are extremely small, and somewhat hard, so that they would puzzle miners accustomed to lodes of larger sizes. The lodes being only 3 or 4 in. wide, it is necessary to take out as little ground as possible, and thus the miner, who is, however, obliged to carry a portion of the ground before him with the lode uses what is called a packer or poker.

I now come to the use of wedges in getting coal, and it would be well, in many respects, if they were used exclusively. When the coal is properly holed, the natural stratification may or may not, according as the colliery is laid out, have a tendency to bring down the mass so quickly that the men can hardly work without danger of its falling upon them. In the larger number of cases, however, it is necessary to employ some process to bring it down. For this purpose a series of wedges are placed on the top of the coal, between it and the roof. Blows are then given in succession along the line, and the whole is broken off to the farthest point of the holing, and falls down. It unfortunately happens that some coals are so hard and so attached to the roof that bore-holes are made, and powder lodged in them, to blow them down. This is a practice productive of a great number of accidents. It is now a desideratum to find out a mechanical agent more powerful than wedges, to supersede gunpowder. The evils of gunpowder are—First, that the blast itself is liable to ignite fire-damp; secondly, that in the actual removal of the masses it may free fire-damp, and let it into workings which did not before contain any, and thus lead to danger; and, thirdly, that carrying a naked light to fire a fuse is a most dangerous system. It is, therefore, most desirable that something else should take its place, and many experiments have been made. Amongst others, compound wedges have been tried, and screws to force down the coal, but nothing as yet has been found so effective as gunpowder. It has often been said that, with proper care and attention, it is not dangerous; but it is impossible to get rid of the entire risk. In quarries the men use what is called "plug and feather." A series of holes is drilled as if they were about to fire a charge of powder, and then wedges put in. But ordinary wedges in extremely hard rocks would only split off the angles, so they put in on each side of the hole a strong piece of iron, leaving only just room enough to admit the feather edge of a large wedge, and the result is that great masses of rock are detached. Another plan in particular kinds of rock is to bore a series of holes, and put into them pieces of dry wood, which when water is poured in swell, and rive off large masses of stone. In the Finland granite quarries the same result is produced by the action of frost; the holes being filled with water, the crystallization is powerful enough to force large pieces of granite from their beds. In ancient times, however, the hammer and wedge furnished miners with almost the only method by which the rocks were worked through, and if we compare the older work with that which is more modern we shall not discover many signs of inferiority.

LECTURE XVII.—In our last lecture we discussed the ordinary varieties of miners' implements which may be used without the aid of gunpowder, there being many circumstances under which the use of that explosive would be highly dangerous; indeed, as we showed, there are many cases in which the hammer and wedge and pick have to be preferred to any other system, and that not only where fire-damp is dangerously present, and when, therefore, every prudent engineer would avoid the use of gunpowder, but where it is necessary the miner should be able to tell beforehand what will be the effects of the power he employs, and which will not, like gunpowder, shatter the rocks at a distance from the scene of action. Thus, in sinking a shaft, a ledge has sometimes to be formed to support lining of various kinds, which may be necessary to keep back water, and which may, therefore, have to uphold a great weight, and then gunpowder could not be used, as its effects might extend beyond the point desired, and it might leave behind some unseen fracture, which in time would prove disastrous. Again, if the lower portion of a shaft had to be cut out, to form a foundation on which to erect a waterproof structure, and gunpowder were used to blow out the rock, it would, probably, occasion a number of little cracks, which might lead to serious accidents. In these and all similar cases the hammer, and chisel, and pick must be used now just as they were in old times, and by means of which the old miners have left us such beautiful specimens of their skill. There are, however, one or two other things which suggest themselves. Supposing we have to deal with a mineral mass of an uniform character, such as a bed of coal, in which a man is set to do a certain amount of work in a certain time, his labour is of an extremely monotonous and even character. When he has done another man takes his place, and so they go on from day to day. This is much the same whether it is done on the long wall system by a number of men together, or whether the face of the coal is cut up into a series of stalls, or headings, each man in his own stall. The work of holing varies much, no doubt, amongst the different beds, but each case has a certain similarity. It is true in some of the French collieries they cannot hole far before the natural pressure forces the mass down bodily, and in our own country a great deal of "small" is made, because the coal will not hold up long enough. Considering these circumstances, it is not surprising that it should have suggested itself long ago that this monotonous work of cutting away the coal with a pick might be supplanted with some class of machinery. A long while since a contrivance of this kind, worked by steam (to which the name of the "iron man" was given), was tried. The colliers, looking upon it with no friendly eye, it is not surprising that it should have proved a failure, and many years then passed away, during which nothing of the kind was proposed. More recently, however, the ingenuity of colliery engineers has been turned in this direction to see if something could be done, prompted, no doubt, by the way in which so many strikes occur, and in which ruin is so often brought near to enterprises of this kind by the unreasonable demands of the men.

Amongst these recent attempts at a satisfactory coal-cutting machine may be mentioned that of Firth and Donisthorpe, of York, which, in one or two instances, has been kept at work for some years, with a considerable amount of success, under favourable circumstances. The patent of Jones and Levick, Welsh engineers, is also a good attempt. It runs on rails up to the face of the working, against which it wields a strong iron pick, attached to the piston-rod of an engine worked by compressed air. This machine will undercut to the depth of 10 inches the first time it passes along, then a second course will take out another 10 inches, and so by successive cuts the coal may be undercut to a depth of 2 feet 6 inches or 3 feet. When everything is favourable, the rapidity with which this machine does its work is remarkable. There are conditions under which it works with greater efficiency than under other circumstances; as, for instance, where there is a good roof, and sufficient space, with suitable roadways. An excellent modification of the principle of this machine has been introduced by Messrs. Jones and Levick. It has a vertical shaft, so that the pick may be placed at different heights; and it is arranged to work not only horizontally, but by an ingenious contrivance, so that the operation of cutting may be performed on the coal at any convenient angle. Another machine, which has been found to be very efficient under favourable circumstances, is that of Carratt, Marshall, and Co., of Leeds, and, besides its work on the face of the coal, a portion of the compressed air with which it works is allowed to escape in a state of compression, and so diffuse a considerable amount of coolness. This machine does not cut with a pick as the others, but, so to speak, gouges the coal away with a strong bar, forced out from the extremity of a piston-rod, scooping away the coal in an oblique form, by means of certain scoops attached to it. In this way stroke after stroke follows, each shaving off a portion of the coal. The machine has one or two other peculiarities about it. For instance, it has a strong vertical rod, having a T-head, so that at the time the scoops are planing away at the coal, this rod is forced up against the roof, and so a sufficient fulcrum is obtained to work from. Thus the machine is held firm and fast by its own action. It may, however, be naturally asked whether this is not a dangerous expedient, as some roofs would not bear such treatment? The simple answer to that question is that this machine could only be employed with advantage where the roof was sufficiently strong; and, therefore, those who have to employ these machines must look carefully to all these points, and select that best suited to the characteristics and position of the material which is to be worked. I have it, however, on the authority of a gentleman who has tried it, that in his case it has proved almost, if not entirely, a perfect success; and there is no doubt that when in good order, and the circumstances all being favourable, it will do an amazing amount of work in a short time. Besides these, there are many other machines, each with its own peculiarities, so that there is room for hoping that if we cannot have one recognised machine, applicable to all circumstances, the best of these varieties will hold their ground, each in the districts to which they are adapted, and thus this important portion of the labour of collieries will, in the end, be done at a much cheaper rate, and with greater rapidity.

We next come to the employment of explosives in breaking ground, by means of which large masses are thrown down in a shorter time, and with greater facility than in any other way. The application of gunpowder to mining is of comparatively recent date. Strange mistakes have been made on this subject, certain works of an undoubtedly ancient character having been ascribed to gunpowder. If we look back to history we shall find that, although the use of gunpowder to kill and mangle our fellow-creatures was brought into play long before, it was not until 1613 that it was proposed, by Martin Weigall, in Germany, to apply it to mining, and it was 20 or 30 years later before it was at all generally used even in Saxony and the Hartz. Gunpowder was first used in England in a small Cornish copper mine in the time of Queen Elizabeth, and although its use became generally known it was long before its aid was generally applied. The principal use made of it then was to work stopes in quarries, or to blow up and shatter large masses of rock which had already been freed on two sides by other means from their beds. In the latter case, say that of a hard quartzose veinstone, a few bore-holes, loaded with small charges of powder, were found to be very effective, and led the way to its now frequent use in mines. The introduction of gunpowder, whatever doubts may be entertained as regards war, has been of incalculable advantage to mining. Before its application the shafts were small, the levels so confined that it was often difficult, and always wearisome, to pass through them, and the air-ways and everything else diminutive. As soon as gunpowder came to be used it was found that there was no advantage in having the levels so small, and that by the aid of the new explosive a good-sized gallery could be cut as cheaply as a small one, giving the men more room to work, more air to breathe in, and great advantages in bringing down and removing the minerals. Every intelligent mining engineer, therefore, knows now that there is no advantage in small workings. A great number of experiments have been made in boring and blasting in Germany, and here also as to the best tools to be adopted. The first to be noticed, and the most common, is a kind of auger, composed of iron, with a steel cutting edge, and being raised by the hand of the workman its weight gives the necessarry impetus to the blow. In the extensive granite quarries of West Cornwall, and the not less widely-extended slate quarries of Wales, the cutting tool is called a "jumper," the rebound giving it a certain liveliness in the hole after every blow. In other places it is called a drill, or an auger. The workman lets it fall gently, but continuously, and with great rapidity, and it thus beats the bottom into powder, or small chips. From time to time it is necessary to clear out the hole, and then a scraper is used to bring up the rubbish. By this means, and by the use of water in the bore-hole, the orifice is left clear as it descends in depth. This simple method of boring is largely used, and it requires no remark, except that in the harder rocks considerable skill is requisite to get the borer to take due effect.

Then comes another variety, which is worked by blows from a hammer. This may be either round or square, and is held by the borer with one hand, giving it a turn after every blow, and striking the top with the hammer in his hand. When it is larger one man holds the borer while two men strike on it alternately. These augers are usually from 1⅛ in. to 2½ in. in diameter. The sizes vary, but it has been proved by experiments in Germany that smaller bits and ¼ in. holes are not advisable.

Then, as to the material of which these borers are made. About 18 years ago it was almost always the case that the bar of the auger was made of the very best fibrous iron, whilst the head was of steel for a short length, and then the bit, or edge, of the best shear-steel. These then became replaced to a great extent by the augers usually employed in Derbyshire, where they were accustomed to use cast-steel, which did very well in the ground there—chiefly a fluor-spar, so moderate in hardness that I have heard of a borer bequeathing his auger to his son; while in other districts a workman will wear one out in a single day. Of late years, however, cast-steel has been substituted for iron as the more economical, besides which it is found that the blow given on the head of an auger of cast-steel is transmitted so much quicker to the edge as to give it a decided advantage over augers of iron with only steel bits. It had been observed with the iron augers that the borers had to work with them some little time before they gave full effect to the blow, some change in the iron being apparently produced by use. In spite of the greater first cost of steel, it was not long ago adopted in a quarry in North Wales, where the rock was extremely hard, and the manager found the actual expense of working reduced by 10 per cent. The form of the cutting edge varies a good deal. Where they have moderately soft ground it is frequently made the ordinary chisel shape. In the Hartz it is often curvilinear, but they have different shapes for different grounds. The "crown" and "club" borers, which have two edges at right angles, used to be much employed in Italy; while in Mexico it is swallow-tailed. The hammers are of various shapes, with the heads varying from 2 lbs. to 4 lbs. or 5 lbs. Some are double-headed. Of course, the material ought to be good. As difficulties occur, and as according to the nature of the ground changes of the auger may be necessary, so it is sometimes necessary to change the weight of the hammer used to give the auger its proper impetus.

Original Correspondence.

MR. GRIFFITHS'S ANNUAL REVIEW OF THE IRON TRADE.

The first half of the year under review was unprofitable, and trying in the extreme to the ironmasters of Great Britain.

From January to June a scarcity of orders was felt in all the iron-making districts of the country. The masters of Belgium, France, and America likewise suffered at this period from the same want of demand; and as the demand for rails was then sluggish and unsatisfactory, some large works in South Wales and Middlesborough were compelled to turn to bars and plates, which had a still more depressing effect upon districts like North and South Staffordshire, where bars and plates are the great staple. This state of things continued until the end of June, when the puddlers' strike ceased, and the effect of the reduction in the price of iron began to be felt in attracting orders to this country, in which we had previously been undersold by foreign makers. From this time prospects brightened. The French and Belgians now loaded their books with orders; America followed their example, and a better demand was experienced for all kinds of iron in Middlesborough and North Staffordshire. The rail trade, upon this change, became more active, and the great mills in South Wales and on the Tees were put into full activity, continuing busy until the end of the year. This increased demand for rails has been the main cause of the greater activity of the iron trade since June.

We estimate the production of pig-iron in the United Kingdom, for 1868, at about 4,800,000 tons, the value of which, at the furnaces, will be about 12,000,000*l.*

Scotland produced....Tons	1,051,000	Derbyshire .....Tons	172,000
North Riding of Yorkshire.	650,890	Shropshire	110,000
West Riding of Yorkshire..	110,000	Cumberland	148,000
South Staffordshire	500,000	Monmouthshire.....	987,000
North Staffordshire	230,610	Glamorganshire.....	
Durham	490,000	North and South Wales..	
Lancashire.....	350,500		

These are the best estimates we can give, after a careful examination of the subject. The make of Northamptonshire is below the usual average this year, the improvements going on at the Heyford Works having interfered with the source of supply. The reduction in the Northamptonshire supply, when the figures are correctly added up, will be considerable; nevertheless, it will be observed that Northamptonshire has increased its supply of minerals to a great extent. We have raised during the year 10,100,000 tons of iron ore, of the estimated value of 3,150,000*l.*, of which—

Lancashire gives ....Tons	867,000	Northamptonshire....Tons	500,000
North Staffordshire	800,000	Derbyshire	300,000
South Staffordshire.....	520,000	Shropshire	240,000
West Riding of Yorkshire..	600,000	Scotland	1,800,700
North Riding of Yorkshire	300,000	Ireland.....	50,000
Cumberland	920,000	From Spain and the Island of Elba	100,000
N. & S. Wales & Monmouth	1,300,000		

The "Black Country" and East Worcestershire have raised 10,250,000 tons of coal during the year, and although much has been written of late reflecting on the capabilities of this district to supply coal, we have it on good authority that the Earl of Dudley's comparatively exhaustless stores of thick coal in the earth is adequate to the prospective demand for many years to come, and, if necessary, the noble Earl could double the present supply in six or twelve months.

The ironmasters of North Staffordshire gave notice for a reduction of 1*s.* per ton to the puddlers in January, which was acquiesced in by the men of the district; millmen's wages being reduced 10 per cent. at the same time. At the preliminary meeting of the South, held in March, the Ironmasters' Association resolved to reduce the price of iron 10*s.* per ton, puddlers 1*s.* per ton, millmen 12 per cent. The puddlers objected, and struck, and remained idle, with numbers of the works at a standstill, until the middle of June, when they reluctantly resumed their work. The argument of the men was that a reduction of 1*s.* per ton in puddling on 10*s.* reduction upon iron was unfair.

However, as the scale of the previous advance was in favour of the men, this circumstance, together with the unfavourable prospects of the trade in June, induced the puddlers to give way, and resume work accordingly. In April the wages of the colliers on the Bilston side were reduced 3*d.* per day in all thin coal measures and stone, and in May or June the thick coal men were reduced 6*d.* per day. During the puddlers' strike no less than 10 houses in the Black Country came to grief; but the insolvent firms were all known to be weak, and but for the support given to them by the joint-stock banks must have failed before the advent of the strike, which, by cutting off their returns, [illegible] without the resources in cash which the weekly yield of iron gave them when works were in motion. These casualties closed numerous iron works, and had a most depressing influence on the trade of Staffordshire.

While on the subject, we may remark that although failures in the iron trade here have been proverbial of late years, difficulties of this kind never have occurred with the great leading houses who make the "marked" Staffordshire iron. They are well known in the district, and it would be invidious to mention names. At the same time, it is only just to say that the wealth, caution, and prudence of the leading ironmasters are as well known in the district as their brands of iron are famed in London, India, China, Russia, Melbourne, and New York. These houses supply their Staffordshire iron to most of the railway companies and engine shops of Manchester, Sheffield, Leeds, and London, and export largely to India, China, Melbourne, Hambro', and other foreign markets where Staffordshire iron is in favour. Besides these wealthy firms, there are scores of manufacturers in the Black Country who make an inferior article; hence the impossibility of fixing a price to govern the produce of the whole district.

The cost of iron produced by the leading houses is at least 15*s.* to 1*l.* per ton in advance of the cost of the iron turned out by the inferior makers above referred to. The former use "all mine" pig-iron, the latter "cinder" pigs and "pottery mine" which enables them to produce an article much cheaper, but decidedly inferior in quality.

We have gone more fully into the classification, because buyers of iron ought to know that Staffordshire produces two distinct qualities of iron. The Earl of Dudley and the old wealthy houses make the very best, while the second class make the best they can out of the inferior materials which they consume, and as they have to compete with the other districts, their produce is sold for the best price they can get.

The reduction in price attracted foreign orders to this country, and trade assumed a more cheerful aspect in July or August. Orders for all kinds became now plentiful, and in September the manufacturers bought pigs freely, which had a tendency to stiffen prices, and by the end of September and the beginning of October the best mine pigs had advanced 1*s.* 3*d.* per ton.

During the whole year orders for hoops have been plentiful, and a fair business has been done in galvanising sheets and thin sheets. Since the reduction in price the leading houses have been fairly off for orders for bars and sheets; and those who make hoops have been busy in this department, but the demand for boiler plates, which is a leading article in South Staffordshire, has not kept pace

with other kinds. No failures have occurred in North Staffordshire during the whole year, indeed only one difficulty has occurred here for many years, and although the ironmasters have not been making large profits they have done a steady, and we hope moderately remunerative, trade during the last six months; and we have reason to know that the quality of North Staffordshire iron is becoming more and more appreciated year by year in the different markets of this and other countries, and is now frequently used in preference to other makes of high repute.

FUTURE PROSPECTS IN THE TRADE.

The general opinion in London is that the trade will improve and prices will advance sometime this year. We incline to the opinion that if the men continue steadily at work until April or May the trade may be so far improved as to justify the masters in advancing the price of iron and men's wages at the same time. Our opinion is formed on the following facts, which are well known in the trade, and will probably not be disputed by the best authorities.

1.—America still requires and must have, to complete the Pacific and other great railways for which the Congress has voted money as loans to the companies, 170,000 tons of rails, a very large portion of which will be made in England.

2.—Russia still requires, and must have, further large quantities of rails, fish-plates, &c., from this country, to finish her great network of railways.

3.—The Indian demand is likely to be resuscitated this year for rails, but more particularly for general kinds of best iron.

4.—The trade of Melbourne is improving, and expected to require rails and other iron in quantities this year.

5.—We have not much reason to fear Belgian competition, their books being full of orders for rails and other kinds of iron.

6.—France is well supplied with orders for rails for the French empire.

7.—The effects of the disastrous collapse of 1865 are gradually passing away, money is being used more freely in commerce, the general trade of the country is expanding, and under the influence of a plentiful harvest both here and in France, with returning confidence in financial circles at the same time, presuming that stocks of iron are low at all the merchants' warehouses both at home and abroad, we believe that the increased activity of the trade will continue, and in April or May next, as mentioned above, we shall see higher prices.

With regard to war, we do not expect it this year, and if Turkey and Greece come to actual fighting, we cannot see how this squabble *per se* could encumber the prosperity of the iron trade.

Broad-street, London. SAMUEL GRIFFITHS, Metal Broker.

THE HEATON STEEL PROCESS.

The following letter from Mr. Heaton, in reply to that from Mr. Bessemer, which was inserted in the *Mining Journal* of December 26, was addressed to the *Times*,—but some portions of it, and those considered of material consequence by Mr. Heaton and his friends, being omitted, we have been requested to publish the statement *in extenso*:—

SIR,—[The public will no doubt duly appreciate the motives which have so "imperatively" demanded of Mr. Bessemer what he is pleased to call a "statement of facts." His object is obvious. He would alienate from me the support upon which I depend for the due development of my invention, by asserting that he has himself rejected an offer of my patents which I have never made him, and by hinting at proceedings in Chancery, for which, as I shall prove, his own counsel have advised, he could have no possible justification. Mr. Bessemer has indeed abused the privilege of your space; but since he has so done, I have no choice but to ask you to allow me to disprove circumstantially every one of his statements.

I premise by remarking that I can have no objection to admit that Dr. Miller himself testified to my having produced crude steel. But I fail to perceive how my expression of indignation at Mr. Bessemer's gratuitously impugning my process is in any way rendered "ridiculous" by such an admission.

Mr. Bessemer professes to disbelieve that the result of my process will enable me to turn out, by means of a furnace, ingots suitable for making rails because Dr. Miller did not certify thereto; and, questioning the very existence of my newly patented reverberatory furnace, he is pleased to volunteer an opinion adverse to its merits. How far public opinion will hold Mr. Bessemer justified in his attempt to thus damage and discredit the efforts and claims of a brother inventor remains to be seen. Meanwhile, it is but necessary for me to say that Dr. Miller and Mr. Mallet in their preliminary reports testify, and were invited to testify only, to the capabilities of my process to make out of certain attested pig—1st, true steel; 2nd, crucible tool steel; and 3rd, wrought iron.]

Mr. Bessemer flatly contradicts my statement that I can make steel as good as his own, and at a less cost, from the same materials. I am contented to appeal to facts, and these will shortly come before the world verified by a competent and disinterested authority. An Imperial French Commission, headed, with the sanction of the French Government, by M. Gruner, Inspector-General of Mines in France, and Professor of Metallurgy in the Imperial School of Mines, have, as I led you to expect, just spent four days at Langley Mill; and, after having witnessed the conversion of their own impure pig-iron into excellent steel, and verified the cost of production, have taken away with them evidence which must carry conviction to all who are interested in establishing the truth.

Now, I do not feel called upon publicly to divulge my cost sheet—open, however, as it is to inspection for legitimate purposes—simply because Mr. Bessemer choses to insinuate, without warrant, that I cannot turn out "steel rails" by my process at less cost than "Bessemer rails," in the face of my assertion that I am turning out steel rails without re-melting the product of my converter, at a cost with which no Bessemer steel can compete.

[He tells you, Sir, that his pig does not cost more than 70s., and that he gets his atmospheric air for nothing; yet the market price of his rails is 12*l.* per ton. Now, if Mr. Bessemer's statement be correct, after making due allowance for the cost of rolling the rails, there must be here a large margin for profit. Is it not strange that ironmasters, so "keenly alive to what is best for them," in "these bad times," should not have "rushed in a body to take licences" under Mr. Bessemer during the "12 years" the eligible opportunity offered? But, strange to say, only 15 of them—as has recently been officially stated—have joined in the rush; and, stranger still, it is credibly asserted that more than one of these have repented of their temerity. I, therefore, conclude that the cost of the Bessemer process is much greater than would be imagined from the figures Mr. Bessemer puts forward; great enough, indeed, to have afforded him an opportunity of which he has possibly availed himself, of evincing a generous spirit to those unfortunates, by reducing his royalties.

Mr. Bessemer states that he can purchase, for 70s. per ton, pig "of the highest quality." I should like to know where. The present price of the highest class Workington pig is 80s. per ton at the place of production, as per "Iron Trade Circular," Dec. 19. But, assuming that Mr. Bessemer's quotation were the current price, the cost of the cheap atmospheric air, which is, at the very least, 5s. plus the extra cost of the requisite after-dose of spiegeleisen (not less than 8s.), brings Mr. Bessemer's raw material to 83s., or 93s. per ton if my quotation be taken, while the cost of low class pig (say, 42s. plus 24s. for the nitrate) brings my raw material to but 66s.

Mr. Bessemer asserts that the average waste of pig-iron in his process is but 12¼ per cent.; does he include in this calculation the waste in the cupola, with which he debits my process? I have been told by more than one of Mr. Bessemer's licensees, in the presence of several other gentlemen in this office, that 17¼ per cent. is the *lowest* percentage of waste ever yet attained by them, and this enormous destruction of raw material of the most expensive class cannot be ignored as constituting a most important item in the cost of "cheap" atmospheric air.

I mention 24s. for nitrate advisedly, for I have never admitted, and I distinctly deny, that I "*require*" to employ 2 cwts. of nitrate of soda for the production of a ton of steel. With less than 1½ cwt. per ton, I have produced excellent steel this week in the presence, and to the entire satisfaction, of M. Gruner, Baron G. d'Adelswärd, and M. Thiéblemont, the able representative of M. de Wendel, from white forge pig, produced at Baron d'Adelswärd's works at Longwy, in the department of the Moselle, from oolitic ore, similar in composition to that of Northamptonshire. If, then, I can make good steel from such impure pig with that proportion of nitrate, it is clear I can make it with less from purer brands. I, therefore, distinctly re-affirm that I can do what it suits Mr. Bessemer to deny that I can do.

Why need I reiterate that his statement that the cost of re-melting brings up the cost of my ingots several pounds a ton above that of Bessemer steel is absurd. I showed in my last letter that it was idle to compare the cost of my crucible-melted steel with anything else but the cost of crucible-melted steel. It was crucible melting that Dr. Miller saw; crucible-melting gives tool steel, and tool steel is to Mr. Bessemer's rail steel what "plate glass is to window glass." He alleges that he knows of no use of crucibles by anyone to make his metal tool steel. The ignorance which he has displayed as to what is done at my works renders it not incredible that Mr. Bessemer may be equally uninformed as to what is taking place at his own works. I will not, therefore, accuse him of wilful concealment of facts, but in corroboration of my former statement, I am prepared to bring forward evidence upon oath that a 12-hole crucible furnace has been in use for seven years and upwards in Mr. Bessemer's own works, in Carlisle-street East, at Sheffield, and that it has there been the common practice to run the steel out of his converter into a large cistern of water, from which the granulated metal is collected, and re-melted in crucibles for the production of tool steel.

Now, Sir, as Mr. Bessemer tells you he has read every word of the reports upon my process, which he says were as "silent as the tomb" in reference to my furnace, on the efficiency of which he alleges that my process must depend, ignoring as he does the proved success of other gas furnaces, for similar and other purposes—such, for example, as that of Mr. Siemens, equally available for the melting of my crude steel—I would ask him how he comes to be oblivious of Mr. Kirkaldy's reports—no less than nine in number? Mr. Bessemer's justice appears to be dumb as well as blind. Why should he be so curiously silent on the fact shown by these reports, that the problem of making good steel and iron from Cleveland and Northampton pig-iron is solved beyond the possibility of a doubt? Such silence, golden though it may be, is scarcely compatible with the efficient discharge of a self-imposed "public duty," though, indeed, the bearings of these reports may well excite Mr. Bessemer to the "feelings of pain" to which he confesses.

Now, the experiments of Mr. Kirkaldy are not experiments on isolated picked bars. The bars are made from Clay-lane pig, Stanton pig, Butterley pig, Dowlais pig and other brands, which Mr. Bessemer has failed in using, and which he has confessed he cannot use. They have been tested in the most public manner and the number so tested is, up to the present time, upwards of 150. Mr. Bessemer is surely well aware that I stated in my last letter that steel made from pure Clay-lane No. 4 forge pig, bore 53 tons to the square inch, and that Butterly bore 45 tons, while the wrought irons from these brands bore 25 and 24 tons respectively. If he is wilfully ignorant of these facts, neither letter writing nor reports will convince him; but that he is not actually ignorant is evident from his own admission that he has read every word of the reports in question. I may here add that Mr. Kirkaldy, since the date of these reports, has tested the steel made under the eyes of the French Commission, from the impure oolitic French pig, up to a breaking strain of 55 tons to the square inch.]

After such evidence as this, it matters nothing what the product of my process is called by Mr. Bessemer, and I do not need Mr. Bessemer's unsolicited "approval" of what he has never seen, while I am able to produce, as I have already told him, a perfectly homogeneous steel, and cheaper than he can make, even if he could make it from such brands as I employ. I am not aware that it is necessary in all steel making for all time to come that it should resemble Bessemer's in its successive stages, especially when the ultimate results are superior and cheaper.

Mr. Bessemer states that "I wish the public to believe that he cools his metal by his blast of cold air." Nothing of the kind. I argued that he was more likely to cool the metal by his blast than I was by the evolution of oxygen from the nitrate—a theory by which he sought to discredit my process.

[I now pass on to a more personal question.

Feeling it to be necessary to account to the public for his taking out three patents for the use of nitrates, Mr. Bessemer professes to state his real motive for so doing. The motive suggested by the latter half of his letter is that he had been desirous only of protecting himself against infringements by me of his atmospheric patents, and he leads the leader to infer that this desire arose after the abortive issue of certain negociations with him, initiated by me. I ask, in simple justice, to be allowed to refute both statement and inference. To prevent the public being misled, it will suffice to state the fact that Mr. Bessemer's first patent for nitrate was taken out in December, 1867, whereas I never saw Mr. Bessemer till March, 1868.

Mr. Bessemer's statement is, that early this year one of the proprietors of Heaton's patents endeavoured to persuade him to take an interest in them on favourable terms, and that he declined to do so.

I most unequivocally contradict this statement.

At the beginning of this year my patents were exclusively in my own hands, and I had no idea of disposing of them either to my present partners or to any other person, though I had been frequently solicited to do so. My visit to Mr. Bessemer in London, on March 3, was paid from no wish of mine to negotiate with him, but in consequence of an intimation conveyed to me that he wished to see me; and neither on that nor on any other occasion did I, nor any person authorised by me, or by my sole partner at that time, or by my partners since, "endeavour to persuade Mr. Bessemer to become interested in my patents upon favourable conditions," or upon any conditions whatsoever.

I know not whether most to admire Mr. Bessemer's past discretion or present temerity when he asserts that I owe the present validity of my patents to his not having opposed certain disclaimers of mine before the Solicitor-General. Certainly, the tone of his correspondence does not encourage the belief that any rights of his, secured by law, would have been voluntarily surrendered. However this may be, I may say, what will scarcely be thought possible in the face of Mr. Bessemer's statement to you, that the joint opinion of Mr. Grove, Q.C., and Mr. Webster, Q.C., to the effect that my patent in no way infringed on Mr. Bessemer's, was, on the occasion referred to, and in the presence of gentlemen who accompanied me, read to Mr. Bessemer, and in their presence Mr. Bessemer freely admitted to me that I had advanced many miles beyond him on the road to perfection in steel making.]

In a matter of such public importance I may, perhaps, be allowed to show wherein my process is essentially distinct from the Bessemer, and in what the Heaton patent consists. The fact of my process imparting to the molten iron oxygen in a nascent condition, while supplying at the same time a base such as soda, with which the oxydised products may combine, involves a principle, as contradistinguished from Bessemer's, which is of the highest value in its bearing on the elimination of sulphur and phosphorus, and which is utilised in practice in the Heaton apparatus. A reference to Dr. Percy's "Metallurgy", vol.II., p. 819, is sufficient to fully explain this important point; for there will be seen that, instead of the phosphorus being diminished in the Bessemer process, the proportion found in his steel is actually greater than in the pig operated upon; and if the analysis there recorded be compared with Dr. Miller's determination of the phosphorus in the pig-iron I use and in the steel I produce, the advantages will be at once apparent; when, therefore, Mr. Bessemer, with the full knowledge of the opinion of Mr. Grove, his own counsel, that the employment of nitrate of soda in Heaton's converter, for the production of iron and steel, could not be construed into any infringement whatever of his patent, hints at possible applications for injunctions, I would simply observe that unless he advance other than the startling general proposition that "malleable iron or steel," when in a fluid state, cannot be poured into moulds without his license, his application for an injunction would fail.

I claim what I affirm, and have found to be, the only method whereby the nitrate process can be used with any prospect of either chemical, mechanical, or commercial success, conceding, for the sake of argument, the assertion of Mr. Bessemer that the use of nitrate of soda were common property, or even assuming that such use were protected by patent, still, to quote the words of Lord Westbury in a recent judgment, Hills *v.* Evans, 8 Jur. N.S., p. 529:—"If anything remains to be ascertained which is necessary for the useful application of the discovery that affords sufficient room for a valid patent."

That which is necessary for the useful applications of the nitrate process is of the essence of my discovery and patent. It was evidently apparent to Mr. Bessemer that something did still remain to be discovered in order that the nitrate process might be economically and successfully applied. This something is really the object of my invention, and to show how much Mr. Bessemer has appreciated its value, I refer to the specification of his patent, dated Dec. 31, 1867, in which it will be seen that he has attempted to borrow, though in an impracticable form, what I consider to be one of the most important elements of my invention.

Mr. Bessemer declares that "any one of Her Majesty's subjects" may chemically treat molten pig-iron of any kind with nitrate of soda, and produce malleable iron and steel therefrom, without any leave or license from the owners of my patents, provided they do not employ my particular method of doing it. Exactly so. "The particular method" is the one thing I have patented and claim, and this is the Hamlet which Polonius has not recognised. Those methods which involved the use of nitrate in the blast he is welcome to; but he is quite correct in doubting whether anyone would be willing to give him 1s. per ton for the use of them.

Mr. Bessemer, well knowing that the fact of my success, which he still affects to dispute, has not, as he says, been before the public for 12 months, but scarcely for as many weeks, having for the first time been publicly notified in your City Article of October 26, argues that my process must be worthless, because iron masters "have not rushed in a body to take licenses" before its success was known. He conveniently forgets to mention how many years it took him to induce them to adopt his own. Important licenses have already been granted by me, and are being daily applied for, and although misrepresentations have so blinded many to their own interests that they have not cared to make that personal investigation of my process which has convinced all who have done so, thus much cannot be said of our French neighbours, since all the members of the French Commission have at once decided in favour of the adoption of the process which Mr. Bessemer disapproves.

[Mr. Bessemer, having gratuitously provoked a discussion intended to damage my patent, retires from the controversy. In felicitating him upon the cessation of his duties as public monitor, I would but ask him what would have been his opinion of a fellow-labourer in the same field who, during the five years when he was perfecting his process, and endeavouring in vain to convince the iron world of the value of his invention, had taken similar steps to prejudice him which he has adopted towards me.] He admits his inability to deal with my materials. I assert my perfect competency to do so, and thereby to use the words of "Engineering" of Dec. 18, to add at least 10,000,000*l.* a-year to the wealth of the country. JOHN HEATON

20, *Great George-street, Westminster, Dec.* 31.

*** The parts included between [ ] were omitted by the Edit or of the *Times*.

MINING, AND THE PRESENT POSITION OF THE METAL MARKET—No. V.

SIR,—I will thank you to insert a short letter in your widely-circulated Journal on a subject which I think has never before found a place in your columns, but which is, nevertheless, important; and not only so, but singularly remarkable.

You know, Sir, that there exists some prejudice against mining investment, and I have often endeavoured in your columns to account for it, and correct it. The thought lately occurred to me of investigating the official list of the Stock Exchange, and ascertaining the amount paid up on shares in the different classes of investment, and the present value of such; and then compare the results with similar results computed from the list of mines officially quoted. I have done so, and will leave before your readers the facts which speak for themselves, and with no uncertain voice proclaim the superiority of mining investment to any other. The great railway interest is, of course, the most prominent and noticeable. Except the amount invested in the funds, the railway capital surpasses all amounts sunk or expended in any other undertakings. On 33 railways suppose a man held a share in each he would have paid up 4478*l.* The present value of them is 3270*l.*, making a loss of 1208*l.* upon nine companies; if a man held debenture stock he would have paid up 1325*l.*; the market value now is 1197*l.*, leaving a loss of 128*l.*

It is not long ago since there was an agitation for more docks, and prospectuses and advertisements were put forth to show their superior claims upon capitalists. Now the only dock the present price of the shares of which is higher than the original value of the share is the East and West India. And taking the four docks, the state of the matter stands thus—outlay, 400*l.*; present price, 279*l.*; loss, 121*l.*

Foreign and colonial banks have been popular with monied persons. Taking from the official list the 32 foreign and colonial banks, the figures paid up are 786*l.* 2s. 6d.; present price, 841*l.* 15s. 6d. So that if anyone had a share in each of these banks he would have made a profit to the diminutive extent of 55*l.* 12s. 6d.

Notwithstanding so many failures, and the great suffering inflicted, especially upon classes the least qualified to bear it, British banks are popular investments. Taking the 19 from the official list, the possessor of a single share in each would have paid up 324*l.* The present price is 517*l.* 15s., showing a profit of 193*l.* 15s. Foreign mines are more popular than those wrought in the United Kingdom; 28 colonial and foreign are quoted on the Exchange. A shareholder to the extent of one share in each would have paid up 130*l.* 18s. 6d. The value now is only 78*l.* 17s. 9d., leaving a loss of 52*l.* 0s. 9d. The miscellaneous list is a curiosity in its way. If, instead of taking it alphabetically, as the public see it, each form of investment were classed separately, one could be compared with another with more facility. However, taking the whole list, if you, Sir, had a share in every one of these enterprises you would have paid up 3327*l.* 9s., and you would be a loser if you were now to sell them to the extent of 450*l.* 8s. 6d., for the market value of the lot is now no more than 2877*l.* 0s. 6d.

If your readers will review these figures it will be seen that British banks paid better than any other of these investments, but British mines take a higher position on the list, for we find that there are 34 British mines quoted, and upon these 536*l.* 3s. 3d. has been paid-up. Well, would they fetch what was paid for them now? Their value in the market (I refer to the official quotations) is 1446*l.* 12s., making a gain of 910*l.* 8s. 9d.; so that, in fact, while in most joint-stock investments a man could not get in the market what he has expended, the owner of a share in each of the quoted mines would receive nearly three times the amount laid out or paid-up. But, besides the 1446*l.* 12s. which you would receive for your shares in these mines, you would stand in the lucky position of having received 3901*l.* 2s. besides for dividends. In sorrowfully numerous cases connected with joint-stock investment, men, instead of receiving dividends, are paying onerous and exhausting calls, but in the mines occupying their place in the same list dividends are paid at a ratio per cent. utterly unknown in any other form of investment whatever. The analysis which I have pointed out explains how so many who thought it was safe to invest in as great a number as possible were ruined. Instead of one counteracting another, the investor would have lost, as I have shown, both on each class, with the exception stated, and upon the miscellaneous list; whereas, in the case of the mining companies, we may use the old saying, "the more the merrier." If a capitalist had taken a large interest in such of the whole list he would have received in dividends and the value of his shares nines times as much as he laid out.

In my next I will point out the fact that many mines not quoted in the official list are as profitable as the generality of those placed there.

Gresham House, Jan. 7. THOMAS SPARGO.

SUPPLEMENTAL VENTILATING POWER FOR COLLIERIES.

SIR,—Since my letter in the *Mining Journal* of Dec. 26, describing my improved power of ventilating mines, two more explosions have taken place, affording additional evidence that no one is safe with the present mode of ventilation. When more gas is rising in the mine more air is sent down, but how can it have the effect of clearing the continual accumulations in bye working places, cuttings, dips, &c.? When the weighty atmosphere drawn from the earth in rainy weather and fogs mixes with the gases, there should be a sufficient power to clear them out of the mine. The air passes along between brattices and wind-ways, gathering gas from No. 1, then travelling to No. 2, then No. 3, and so on until the seventh or eighth man can scarcely exist, and is compelled to come in front of the blow-george for fresh air. More gas is continually being taken up, until in a mile or two the supposed air has almost become gas to drive out gas; well may the air in other parts become sluggish. I here say abstractedly, on the principle I have pointed out, erect an upright pipe to the roof from the main artery, where the men are at work. If the same idea has before been put forward, why has it not been applied to prevent the sacrifice of life? The effluvia from 300 men in a mine, independent of the accumulation of offal from the food taken down with them, is very great. The air forced down is not sufficient to keep them in proper order for work; therefore, where is the air to come from to purify the gas, which increases? Anyone may have noticed that in a hurricane they are annoyed by smokey chimneys—confine a room, and you have smoke and sulphur; and what is air forced down a shaft but a hurricane passing along, and forcing and compressing gases in chambers or rooms where men are at work, without any door or window to counteract it? Here is the danger—at least, in deep mines. Mr. Southworth, the manager at Hindley Green, states that the quantity of air passing was 54,420 ft. per minute, but as each man requires 500 ft. for bare existence, there should have been for the 300 men at least 150,000 ft., without the extra to remove the surplus gas. The evidence showed that no alteration had been made in that part during November, whilst by my plan, without increased expense, the ventilation of the dangerous parts could have been increased daily or hourly, as required, especially from the singing localities. I say the air is foul, and always will be foul, by the present mode of ventilation. Nothing but the artery and vein system will prevent explosion; the very best ventilated mine cannot escape. The size of the pipe is only a matter of detail; too much criticism about inches of air is murdering thousands. I say, take a broad view, and down with the pipes; do not interfere with the present ventilation, and save a thousand of lives for the next year.—*Kingsland-road, Jan.* 5. C. MARSDEN.

WORKMEN'S DWELLINGS.

SIR,—I had my attention recalled to the condition of workmen's dwellings nearly a month ago by a letter in the *Times*, from a benevolent Durham clergyman, deploring the spread of fever amongst the cottages of the colliers from the damp, filth, and bad drainage of wretched hovels, and the pernicious habits of life such home wretchedness engenders. Though I have been too busy to write to you at the time, as I intended, the subject has ever since been on my mind. The clergyman invokes the aid of the employers of the men and of the benevolent to remedy this deplorable state of things; but, surely, this is a matter the Trades Societies ought to look to. Some resolutions lately noticed in your pages showed so much intelligence and good spirit on the part of the North of England Miners' Union that, if they would only take up this matter as they do rates of wages, I feel assured they would soon work a most satisfactory reform in their dwellings. It is clearly as important as anything they are embodied to help the men to attain. The health of whole families is at stake, and in bad seasons the deaths and misery wholly arising from this cause are woeful. Surely, our workmen are not like overgrown children, who require to be looked to by people wiser than themselves, to keep them out of danger. If the fathers of families, acting through their Unions in a body, would bring pressure to bear on the masters, insisting on common health and comfort in their dwellings, their power would soon be so felt as to secure what is wanted. This means no doctors' bills, no deaths of those that their households mourn for, arising from what may be called a manufactured pestilence. The direct money saving from increased home healthiness is a small, though by no meant unimportant, part of the blessings it confers. Is it not a shame that the English workman, claiming to deserve higher wages than those on the Continent, should be contented to be the worst housed in Europe? What self-respect can a man have, whatever his skill in his craft may be, whose home is little better than a beggar's rest, or a Lazar house?

Let the Trades Unions take this matter up with a will, and they will have the sympathy, help, and approbation of all friends of working men, in their meritorious work. Let them form a committee, to gather evidence, and examine the condition of the several localities of their members; then, calling in the aid of a skilled person in the science of making dwellings healthy, they will soon determine what their employers or public bodies ought to be called upon to do; and what they should themselves do, to make neighbourhoods and houses where they live commonly healthy; and their power to secure such reasonable and necessary demands would, as I have before said, be irresistible, if they only set about their task with that determination which is in itself a sure earnest of success in a good cause.

London, Jan. 2. A MAN OF EXPERIENCE.

THE LOW PRICE OF COPPER, &c.

SIR,—The secretary of the Panulcillo Company having acknowledged the loss of 29,883*l.* by mining and smelting last year, and a very large sum in some unprofitable explorations and experiments—Qy, if the company had returned (say) 200,000*l.*, instead of nearly double that amount, could they have possibly lost as much of their *capital*? The great quantity of metal thrown on the market frightened the consumers, who, most probably, purchased very sparingly, and merchants equally so. Trade is rarely, if ever, brisk when prices are ruinously low, as the last two years. I have always understood that when a firm is losing 10 or 15 per cent. by an article the greater the return the greater the loss; for example, a gentleman holding the greater part of a tin mine in Cornwall put aside from 200 to 300 tons of tin during the 18 months past. Tin having advanced from 42*l.* to nearly 70*l.* per ton in the ore, this advance will make the profit side of the account look pleasing for 1869. Now, this mode of acting I call good management.

When the late panic occurred a vast number of shareholders would not respond to the calls in many young and promising mines, consequently the merchants put all mines in arrear into the Stannary Court, and compelled all the persons they could find to pay, whether justly or not, it mattered nothing to them. In a great number of mines two-thirds of the shareholders when wanted could not be found; this made it extremely hard upon innocent people, and many pursers

had no easy task of it. In one mine I know about 100 of the shareholders shortly after the panic could not be found, and it is a question whether such persons ever existed at all, such was a mode of doing business a year or two previous to the panic. It has been now proved that none but the richest mines could have stood the late shock—old, deep, and exhausted mines had no chance; and capitalists will do well to pause ere they enter into such speculations for the future. Copper will, doubtless, go higher, as it cannot be produced, with few exceptions, at late prices, and a host of mines closed.

Jan. 4. A CORNISH MINER.

MANGANESE IN NORTH WALES.

SIR,—I have lately had occasion, for business purposes, to spend some time in Bala, North Wales, and its immediate neighbourhood; and, having a taste for geology and mining pursuits, I have filled up some of my leisure time upon the mountains. I have passed some very pleasant, and I hope profitable, hours with Mr. Harris on the Mynydd-nodol Mountain, and I only write to you to recommend to English capitalists this very interesting, and, I firmly believe, rich district (I mean rich in minerals).

The Great Northern Manganese Company (Limited), of which Mr. Harris is manager, I think will do more to open up the hidden treasures of this locality than at present can be conceived. I understand their land covers about 300 acres of mountain—rich, I say, very rich, with good manganese and other metals. I cannot, therefore, understand why we must depend upon Spain, Prussia, &c., for a mineral that lies at our own doors. I have written this in hopes that British capital will be thrown into this district, for certain I am that the manganese veins of North Wales, when properly worked, will prove as rich, if not richer, than even those of Spain.—*Chester, Jan.* 6. T. G.

MEXICO COMMERCIALLY CONSIDERED.

SIR,—The special correspondent of the *Morning Post*, in the city of Mexico, has favoured us with a column and a half of the latest news from that republic. His dates are Nov. 27. We were agreeably surprised to find that an English newspaper should have a special correspondent out there. This proves more than ever that Mexico must be showing great progress, when it has caught to such an extent the attention of a special correspondent. Certainly, the news is most important, when it is considered that Congress have ratified the concessions to the English railway company, and granted a subvention of 112,000*l.* for 25 years, or equal to 2,800,000*l.*, which fact was communicated at the last board meeting of the company, in London, Dec. 30, 1868. I quote a few lines from the *Morning Post*:—

"The good effects of the final action on the subject of the railway by Congress already begins to be felt. Along the whole line people are rejoicing at the certainty they have in obtaining employment; money will become more plentiful, and the resources of the country will be developed. From several of the towns on the route letters of congratulation, and addresses of thanks, have been sent to President Juarez and Congress.

Mining interests in various parts of the country appear to be tolerably prosperous, but no perceptible effects have yet followed the new law, permitting the free exportation of silver ore.

Both military and civil officials are punctually paid every 15 days, and to this is attributed, in a great measure, the fact that no dissatisfaction exists in the army, and that they are all loyal to the Government.

I think it may be as well to caution you against accepting as true any Mexican news that comes to you from Texas, *via* New York; there are a set of men there who make a business of concocting false intelligence, and of spreading the most alarming and groundless reports concerning the condition of affairs in Mexico."

We are glad that the information we have given you for the last four months as to the good prospects in Mexico have been corroborated by the special correspondent of the *Morning Post*, and when these are followed by the payment of interest on the English bonds, and the renewal of diplomatic relations, which are now a certainty by the last accounts, we shall never regret having given you impartial and truthful information.

SEVERAL ENGLISHMEN WITH INTERESTS IN MEXICO.

THE RESOURCES OF COLORADO—No. VI.

SIR,—In dwelling upon the ages of the world, and the countless centuries of its existence, what a brief space of time it seems to be since a few hardy and brave men and women first put their feet upon Plymouth Rock and its kindred Atlantic shores, fleeing from the persecutions of the Old World, to sow the seeds of a new and greater world and nation, with a new and higher civilisation. From those—then inhospitable—shores has arisen, as if by magic, a race of Titans, with an empire's might—statesmen, soldiers, scholars, husbandmen, craftsmen, artisans, artists, and poets, sprang up into the first ranks of the world, quicker than in any portion of that world's history. From that nursery of a nation, from that nursery of civilisation, has gone out the spirit of progress over the continent to develope the wilderness of the West, and to-day, where six years before that a few rude cabins of the forest once stood, now stands this busy city of Denver, chief of this new civilisation, and the destitute and native children of these cabins are continually rising to the highest places in law and Government, building up a power, and preparing for a future, which will ere the close of another century draw the capitol of the United States westward, and plant it at their very feet. This formidable people, to be looked at by you, and through the British empire, not as foreigners and strangers, but as part and parcel of yourselves—brethren and branches of your own family. Here, in a region where so few years since solitude and desolation reigned, and all was desert, the busy sounds of cheerful life fill the vales, and what was wild and rugged has become a garden. The flood of busy emigration has flowed in the regions of the Rocky Mountains, and are manifesting themselves in the development of their various resources. Plains arid are proving the fountains of an inexhaustible wealth, enthusiasm which prompted the first adventurers is not damped by the fading of delusive dreams, but still gives energy to the hand of industry, and the plough is now turning the soil in valleys which have been secluded and remained unfrequented since the world began.

Six years have but passed away since the pioneer with axe, and hunter with his traps, were alone possessors of this country, and now in one year alone, that just passed, the business done in Denver exceeded in sales of merchandise $6,000,000: $2,000,000 were paid for freightage, 13,000,000 lbs. of wheat and corn were sold, $1,000,000 worth of lumber, $1,000,000 paid by passengers on stage lines and for express matter, 250 new buildings erected, $2,300,000 gold shipped by banks, United States Mint and others, besides Eastern Exchange, sold by banks, amounting to $8,500,000, and the amount of cash paid over bank counters being the large sum of $78,000,000; and only the other day Denver was a log hut, in which General Denver lived, and dreamed of what she has now become, and here we leave her, and travel on to—

Douglas County, situated south of Avopahoe, laying in the north slope of the "Divide," a spur of the main range, which pushes out to the eastward, between the heads of the tributaries of the Platte and Arkansas rivers. It is well watered, and from its elevation secures more rain than the surrounding counties, and crops are raised without irrigation. Extensive pine forests are found throughout the county, sufficient for years, and from whence Denver draws its supply. Coal is found in great abundance, and will be extensively mined upon the completion of the railroads. Beds of pure iron ore of fine quality exist, and coal and timber, so close at hand, will render it of great importance to this section, while the railroad soon to be finished will make this one of the richest counties in the State. For climate, stock raising, and farming, it compares favourably with any other portion of Colorado.

Jefferson County is partly in the plains and partly in the foot hills, in about equal proportions, the western half being mountainous, the eastern prairie and valley land. Over almost all the county a fine rich sward of native grasses clothe the whole soil, and affords excellent pasturage. The valleys are divided into numerous fertile, well cultivated produce, dairy, and stock farms. All the soil at the foot of the mountains is productive of cereals, root crops, and vegetables in profusion, and of excellent quality, limited only by the supply of water for irrigation, or by the natural rain-fall. The quality of the wheat cultivated is superior, and at the Golden City Flour Mills flour is made therefrom of superior excellence. The dairy product in butter and cheese is large. The mines of Jefferson County rank in importance as follows:—1. Coal.—2. Fire and potter's clay.—3. Copper.—4. Iron.—5. Gypsum.—6. Sand for glass, limestone, and building stone. The coal veins which have been opened, and yielded the best quality of coal, are those at the outcrop, on the sandstone ridges. There are now eight mines opened, but only six working. The veins average from 12 ft. to 16 ft. wide. About 4000 tons were taken out last year, and sold at $5 per ton. Fire-clay, which is mined extensively at Golden City for the pottery and fire-brick works, is in close proximity to the coal veins; its beds are in the upturned tertiary strata, and from 5 to 10 ft. thick. This clay makes a superb article of building brick, an elegant rose-coloured tile, and most excellent common pottery, suitable for domestic ware, besides crucibles, scorifiers, and fire-brick of the finest quality. Between the different beds of clay are found large deposits of bog ore, or limenite, and occasionally manganese. Magnetic and hematite iron are found in the mountains adjacent to Golden City. Copper is found in great richness, yielding by average assay 30 to 50 per cent of copper. Gypsum is abundant, and limestone found in large quantities. There are in this county 16 saw and 3 planing mills, a plaster mill, tannery, paper mill, distillery, and brewery. The value of the manufactures last year in the county was $545,000.

Golden City is the chief town. The main roads into the mountain mines pass through it. It is beautifully situated in a romantic hill-embowered valley, at the foot of the mountains, and contains the principal manufactories of the county, with eight large stores, four hotels, jewellers, and every other kind of shop; three churches, with schools, &c. It has never-failing water-power from Clear Creek, and from its sheltered locality enjoys a higher temperature than that of the surrounding plains, and seldom freezes in the winter. Its location is, I repeat, perfectly beautiful. There is now a population exceeding 2000 souls. Most excellent roads lead to all parts of the State, and there are splendid six-horse coaches running daily between it and Denver, Central, and Chegeune, but by the end of this year it will be connected by rail with the Union Pacific.

Mount Vernon is a beautiful little village, nestled in between the main range and the first foot-hills, where the main road to Idaho and Georgetown enters the mountains. It has most excellent quarries of building stone, with gypsum and limestone in the neighbourhood, and supplies the adjacent counties with lumber and timber.

Boulder County ranks among the most flourishing in the State, and is partly mining, pastoral, and agricultural. Its agricultural capacities are of a superior nature. Wheat averages 45 bushels per acre. For butter, beef, and cheese none excel it for rich pastures and large dairies. The Placer mines and quartz lodes attracted many miners to its creeks and valleys, and was the cause of its first settlement. In the Ward district, which is twenty-five miles north of Central City, and forty miles from Denver, they have 120 stamps now running. The mother vein is the Columbian lode, which is opened under different names for 2000 ft. in length, and in some places showing a solid mineral vein 6 ft. in width; this lode has produced over $150,000 in gold. During the past year several very rich silver lodes have been opened, and when fully developed will form a very important part of its mineral wealth. The eastern part of the county, at the foot of the mountains, is underlaid by a vast bed of coal, and by inexhaustible deposits of bog iron ore. Large iron works have been erected at South Boulder, and produce an excellent quality of iron. Close to it lie the coal beds, from 10 to 14 ft. thick, and even 18 ft. solid coal has been found. The towns are—Boulder, Valmont, and Burlington, all of importance and thriving.

Dec. 26. R. H. L.

OKEL TOR MINE, AND ITS MANAGEMENT.

SIR,—I was glad to perceive in your valuable Journal of Dec. 19 that some of my brother shareholders are beginning to see the unsatisfactory manner in which the committee are working this mine. The statements shown by "A Shareholder" are quite correct. In March, 1868, the debts were over 2700*l.*; and, if they have continued increasing ever since, as I believe, my brother shareholders will be disappointed in supposing they will be liquidated on the realisation of the October ores. How is it possible this mine can pay its way with such heavy charges upon the shareholders?—London secretary (per month), 8*l.* 8s.; ditto, inspection (several times per year), each, 5*l.* 5s.; committee (only two), per month, 2*l.* 10s.; purser, per month, 7*l.* 7s.; agent ditto, 10*l.* 10s.; material receiver, ditto, 5*l.* 5s.; floors dresser, per month, 5*l.* 5s. This is not all; let my brother shareholders examine into the accounts of a meeting held at Kelly Villa, Calstock, where the committee and secretary very comfortably located themselves at an expense to the shareholders which can be seen in the cost-book. It is to be hoped the committee will not continue their annual visits at the above rate. Your valuable Journal, by noticing such proceedings, has been known to put many a deserving mining company on a proper and legitimate footing. It is high time, as "A Shareholder" states, to arouse ourselves from our apathy, and have the meetings held bi-monthly or quarterly, with reports and statements of accounts. ANOTHER SHAREHOLDER.

Tavistock, Dec. 30.

Meetings of Public Companies.

COLONIAL BANK.

The half-yearly general meeting of proprietors was held at the London Tavern, yesterday,—Mr. MARRYAT in the chair.

The notice convening the meeting having been read, the following report was submitted:—

The following statement of the debts and assets of the corporation on June 30, 1868, and of the net profit made during the half-year ending at that date, is submitted to the proprietors in accordance with the requisitions of the charter:—

DEBTS.

Circulation	£	300,175	15 10
Deposits, bills payable, and other liabilities		2,170,007	11 10
Paid-up capital		500,000	0 0
Reserve fund		136,000	0 0
Balance of profit from last half-year		3,783	16 7
Net profit for the half-year		38,606	13 8
Total	£	3,148,574	2 11

ASSETS.

Specie	£	161,011	9 9
Due to the bank in the colonies on bills discounted and purchased, including those past due, &c.		1,493,343	5 9
Due to the bank in the colonies on current accounts		20,666	15 11
Due to the bank in London on bills remitted, cash at bankers, &c.		1,465,488	12 10
Bank premises and furniture in London and in the colonies		8,063	18 8
Total	£	3,148,574	2 11

The directors have pleasure in presenting the above statement, which they hope will be considered favourable by the proprietors, and in reporting that the latest accounts they have from the branches are satisfactory. They have little to add, beyond recommending that out of the net profit declared above, which amounts, after providing for bad and doubtful debts and income tax, to .. £38,606 18 8

An ordinary dividend of 6 per cent., and an extraordinary dividend of 1 per cent., being at the rate of 14 per cent. per annum upon the paid-up capital of the corporation, be made for the half-year ending on June 30, 1868, which will require		35,000	0 0
Leaving	£	3,606	18 8
To which add balance of profit from last half-year		3,783	16 7
Making	£	7,390	15 3
As no addition has been made to the reserved fund since July, 1866, the directors propose to carry to it		4,000	0 0
Which will raise it to 140,000*l.*, and leave to be carried forward to next half-year.	£	3,390	15 3

The CHAIRMAN said he had very little to add to the report just read. The report was short, because satisfactory results required no explanation. A dividend and bonus of 7 per cent. for the half-year would, no doubt, be considered as satisfactory. The accounts generally from the colonies had been satisfactory; everything was going on very well. The accounts were better than those for the corresponding half of the last year, which had enabled the directors to add 4000*l.* to the reserve fund, which they had not been able to do for some time, because it had been appropriated for the purposes of dividend. He hoped, however, that the reserve fund would be henceforth gradually increased, and, at the same time, the present rate of dividend maintained. He had no observation to make as to the working of the bank, but he should be glad to reply to any question which proprietors might put. He moved that the report be received and adopted.

Mr. VILLESBOISNET asked how the reserve fund was invested?—Mr. GURNEY HOARE replied that it was invested in Consols, which stood then at 90.

A PROPRIETOR suggested that some portion of the 3000*l.* of the undivided profit proposed to be carried forward should be set apart as a bonus to the officers of the bank.

The CHAIRMAN said that three years since the board gave the officers of the bank a bonus, and they proposed to do so again.

A PROPRIETOR thought that the reason the reserve fund had not been increased of late was owing to the fact that the surplus of profits had been appropriated to the purchase of the Bank of Jamaica.—The CHAIRMAN said that the whole of the amount agreed to be paid for the business of that bank had been paid, and since the insurrection in the island the Colonial Bank were deriving great benefit from that source.

Mr. GURNEY HOARE having seconded the proposition for the adoption of the report, it was put and carried unanimously.

The retiring directors were re-elected, and the retiring auditor re-appointed.

A vote of thanks to the Chairman and directors for their able, constant, and zealous attention to the affairs of the bank was passed, when the proceedings terminated.

NEW CHIVERTON CONSOLS SILVER-LEAD MINING CO.

A general meeting of shareholders was held at the Guildhall Coffee House, Gresham-street, on Tuesday,—Major BOYLE in the chair.

The notice convening the meeting was read.

The accounts made up to the end of October showed a debit balance of 30*l.* 11s. 6d.

The report of the manager (Capt. Evans) was read, as follows:—

Jan. 3.—The engine-shaft is secured 3 fathoms below the adit level, and cased and divided, with ladder-road complete. The adit is cleared and secured over 600 fathoms, and with the exception of one of the western adit shafts, in which there is a slight crush, the adit is now in thorough repair. Since the last general meeting of the adventurers we have been stoping in the bottom of the adit on the lead lode, to prove whether the course of lead and blende is a separate course of ore to that in the eastern part of the mine, which made so rich in the former workings. We could not get as deep as I anticipated, as we were overpowered with water, otherwise our returns would been considerably more. But from what I have seen in the back, and the stopings in the bottom of the adit level, it only confirms my former opinion, that this is a separate course of lead and blende to that in the eastern part of the mine. I may add that these two course of ores are about 80 fms. apart at the adit level, and as they are lengthening going down, I have not the least doubt that about the 50 fathom level these two courses of ore will meet, and a great deposit of riches will be the result. The tin lode is intersected, and is producing good stones of tin, but being disordered by the lead lode, I calculate we have to rise 3 fathoms before it will be out of the influence of the lead lode, when, from present indications, I have reason to expect profitable ground will be opened up. We have purchased a stamping-mill, with a powerful wheel, and a good stream of water, and I advise that a crusher be purchased, and attached to this wheel, for crushing the ores, which will be a great saving in the dressing of the ores. This wheel is of ample power to drive a crusher to reduce the ores for the return of 100 tons per month. In conclusion, I beg to say, from my experience in the former and present workings, I have not the least doubt that this mine, if carried out with spirit, will be second to none in the Chiverton district, and state, without fear of contradiction, that not a lead mine in Perranzabuloe has returned the same amount of money in mineral at the depth as New Chiverton Consols has. We have now preparing for sampling 17 tons of blende, and about 1 ton of lead.—J. EVANS.

The CHAIRMAN said he had much pleasure in meeting his co-proprietors upon the present occasion, because it afforded him an opportunity of congratulating them upon the increasing evidences which their property day by day presented of becoming upon further development a mine that would successfully vie with those which had deservedly made that the famed district of Cornwall. The report just submitted plainly set forth the intrinsic merits of their property, and if corroborative testimony was required he might allude to the fact that the favourable opinion expressed in that report was more than confirmed by some of our most eminent practical authorities. When he mentioned that such men as Capt. Simmons, the agent of the Duchy of Cornwall; Capt. Gifford, the agent of the fashionable market mine (Prince of Wales); Capt. Samuel Michell, the veteran miner of the Perran district; Capt. Peter Floyd; and last, though most certainly not the least either in experience or ability, Capt. Henry James—when, he repeated, such an array of practical testimony could be adduced in favour of any mineral property, he hesitated not to say that its shareholders were upon the highest grounds warranted in prosecuting its development with a vigour and upon a scale commensurate with its resources. New Chiverton Consols, unlike many young progressive mines, possessed the incalculable advantage of an immunity from that incertitude inseparable from the opening out of mineral veins in improved or virgin ground; for although it had been developed to a very limited extent in comparison with its capabilities, yet it had, in the face of every imaginable difficulty, and with the most ineffective appliances, yielded to its former owners a revenue at least equal to the expenditure necessary for the opening out of the property—in other words, that the returns obtained under such manifest disadvantages, and when the produce was of materially less commercial value than at the present time, had provided the capital which under ordinary circumstances would necessarily have had to come out of the capital account. Such, then, had been New Chiverton Consols, and although he was not about to make any prophetic statement, for "the best designs of men and mice aft gang aglee," yet he thought all would fully agree with him when he said that they had before them at least more than an ordinary prospect of realising a handsome return for the outlay they would be called upon to make to bring the mine to that stage of development which would enable it to yield regular and progressive returns. He knew that mining was a synonyme for speculative uncertainty, but he also knew when success was attained that the results far exceeded those that could possibly accrue from any other description of investment; and while he was not going to say that New Chiverton would be equal to West Chiverton, which was dividing profits yearly to the amount of something like 30,000*l.*, nor that it was likely to yield such fabulous profits as Old East Wheal Rose, or Old Shepherds, but he did mean to say that, considering the favourable position of their mine, that its geological features were identical with those of the pioneer mines of the district, that so far as its development had progressed its analogical data, so to speak, assimilated in every respect with its wealthy neighbours—considering these conclusively encouraging circumstances, the shareholders in New Chiverton Consols unquestionably had well-based hopes for believing that their property will at any rate yield them an abundant return. (Hear, hear.) He then moved that the report be received and entered on the minutes, and that the accounts as submitted be passed and allowed.—Mr. BARNES had much pleasure in seconding the proposition.

The CHAIRMAN said he had omitted to state that the manager of the mine was present, and would be glad to afford shareholders any additional information they might desire,

Capt. EVANS, in reply to a question, stated that the best answer he could give as to his opinion of the future of the mine was the fact that he was in the same boat with the shareholders, and was willing to subscribe his quota to bring the mine into that productive condition compatible with its resources.

Mr. ROSS (Messrs. G. R. Ross and Co.) said their gallant Chairman had so fully and ably submitted every detail in connection with the position and prospects of their undertaking that but little, if anything, was left for him (Mr. Ross) to add. As, however, their gallant Chairman had adverted to the circumstance that the mine had been favourably reported upon by some of the leading practical authorities in Cornwall, it would, probably, not be considered out of course were he (Mr. Ross) to further refer to that point. Those who knew him best were perfectly aware that he took nothing for granted, and that when he had obtained all the data he could he then accepted the whole with that veritable *cum grano salis* about which so many people talked. In this case, as in others, having gained all the information possible, it would, perhaps, be of interest to those associated with the concern to be made familiar with the views enunciated. He would first refer to Capt. Gifford, who, as the Chairman had LOW properly said, was the manager of the fashionable market mine, Prince of Wales. Capt. Gifford, after entering minutely into the different points of operation, concludes his elaborate report by stating that taking into consideration the length and breadth of the sett, with the east and west and north and south lodes, which have been so productive in the adjoining mines, he would strongly recommend a steam-engine being erected at the new engine-shaft of not less than a 40-in. cylinder, to which a line of rods can be attached to work the old shaft, so as to prove the two shoots of ore ground already discovered with one expense of water charges; and (adds Capt. Gifford) if the works he recommends are carried out with vigour and economy he firmly believes it will be found to be a very remunerative property. So much for the opinion of Capt. Gifford. He next came to Capt. Peter Floyd, who had had a lengthened experience in the mines of the district. Capt. Floyd, who also entered fully into the details of the mine, states that, looking at the lode in the back and bottom of the adit level, which is of a most promising character, he is of opinion if the formation of metal is followed it will result in a valuable discovery of lead ore. Taking into consideration the position of the mine, the highly favourable prospects and returns of lead immediately available, Capt. Floyd feels confident that profits equal to the adjoining mines will be participated in by the shareholders. Capt. Samuel Micheli, who had likewise had a life-long experience of the mines in the district, states that time is the only key to success, and should the operations be carried on as heretofore for a year to come profitable results will be realised. Reference had been made to the report of Capt. Simmons. Now, Capt. Simmons, it might be mentioned, was the mineral agent employed by the Duchy of Cornwall on behalf of H.R.H. the Prince of Wales, and, therefore, when the Chairman said the opinions of the highest authorities in Cornwall had been favourably expressed in regard to the New Chiverton, that remark had not been made without the best foundation. Suffice it to say that Captain Simmons's words were—"I have no doubt but what good returns will be quickly made, and I consider the property to be worthy of investment, with very great chances of obtaining highly profitable results;" and Captain Henry James fully confirmed that opinion. Apart, therefore, from the results that were already being realised—which, after all, was the most satisfactory report that could be submitted—the shareholders certainly had every assurance that the most cynical could desire to encourage them to provide the mine with adequate machinery, so that the property may be placed in a condition with economy and progressive regularity. (Hear, hear.)

Capt. EVANS, in reply to a question from Mr. Ross, stated that in no mine in the neighbourhood, not even excepting West Chiverton, had he ever known an instance in which the stope in the adit level had been worth 5*l.* per fathom, and the shoot of ore was from 200 to 300 fathoms in length. They paid 3*l.* per fm. for stoping, and the lode, as he had already stated was worth 5*l.* per fathom. During the last quarter's working the mine returned 298 tons of blende, the average value of which at the present time would be about 3*l.* per ton; and, in addition to this, the mine returned in the same period about 40 tons of lead.

A SHAREHOLDER asked the reason that operations were suspended?—Capt. EVANS said that the machinery was unequal to keeping the mine in fork, and the necessary capital to provide more powerful machinery could not be obtained, in consequence of the failure of some of the largest shareholders. He estimated that the total cost of purchasing and erecting a suitable engine would be about 1200*l.*, and the working of the mine for twelve months would incur a cost of 150*l.* per month, half of which he estimated would be met by returns. He proposed sinking the shaft 20 fms. below the lowest point, and to drive a 15 fathom level, and at that depth he looked forward to have good paying ground.

Capt. HANDLEY enquired if the manager had any doubt as to the eventual success of the mine?—Capt. EVANS said that his opinion had never been altered as to the merits of the mine, and as the development proceeded the more confirmed became his opinion.

After some further discussion the report was received and entered on the minutes, and the accounts were passed and allowed. It was arranged that a crusher should be obtained forthwith, and that tenders be advertised for to supply a 30-in. cylinder engine, buildings, &c. A call of 7s. 6d. per share was made.

Votes of thanks were passed to the Chairman, committee, and the officers of the mine, when the proceedings terminated.

NEW WHEAL LOVELL MINING COMPANY.

The quarterly meeting of adventurers was held at the Angel Hotel, Helston, on Wednesday, at which there was a large attendance.

Mr. F. HILL, Chairman of the committee, presided.

Amongst those present were the Rev. Anstey, Messrs. John Kendall, T. E. Lanyon, Chas. Bawden, R. H. Cade, Robt. Cade, Jos. Ralph (for self and F. M. Williams, M.P.), H. Pearce, Geo. Lanyon, John Pryor, W. Carne, Capt. Mayne, Capt. Priske, &c.

Before the Chairman opened the business, Mr. Chas. Bawden handed in for self and friends 1800 proxies, being about half the mine.

The CHAIRMAN read the agents' report, which was published in last week's Journal, and which showed the mine to be in a very progressive and encouraging condition.

The accounts for the three months' working showed a profit of 225*l.* 12s. 3d., which was carried over to the next account. The tin raised during the three months had realised 1567*l.* 1s. 10d.; and there had been paid in labour cost 910*l.* 17s. 3d., and in merchants' bills 312*l.* 16s. 5d.

The report and statement of accounts were unanimously received and adopted, and ordered to be circulated.

Mr. C. BAWDEN highly complimented the committee, and had great pleasure in proposing that the present committee—Messrs. Frederick Hill, John Kendall, and T. E. Lanyon, be re-elected, and that the name of Mr. Frederick Martin Williams, M.P., be added to the committee. Mr. Williams had taken a large share in the mine, and he possessed one of the best names in the county, as well as being one of the best business men. (Applause.)

Mr. R. H. CADE seconded the motion, which was carried unanimously.

The CHAIRMAN said there was one point which he thought it only right to mention to the meeting, though he had been requested not to do so by Mr. Bawden, whom the matter concerned. They were all aware that a large number of their shareholders resided out of the county, many of them in London and other large towns. Now, he (the Chairman) received a communication the previous week on behalf of those distant shareholders to the effect that, considering the great services which Mr. Bawden had done for the mine, his remuneration ought to be increased. (Hear, hear.) Mr. Bawden had come to the mine when it was in a state of great depression, and now that he had placed it in a healthy condition his services ought to receive a more liberal reward. He (the Chairman) had received that communication wholly unknown to Mr. Bawden, who, as soon as he became aware of it, was very anxious that it should not be mentioned to the meeting, as his whole heart was in the mine, and he would, therefore, rather not press the matter then. The question was taken out of his (the Chairman's) hands. But, knowing how small Mr. Bawden's salary was, and feeling the justice of the reasons urged in the communication he had received from the distant shareholders, he felt bound to mention it. He must, however, say that Mr. Bawden's conduct did him great credit, and showed that the very deep interest which he took in the welfare of the mine was not stimulated by any selfish motive to aggrandise himself at the expense of the other shareholders. (Applause.)

It was unanimously resolved, on the application of Mr. Bawden, that Capt. J. Priske should be allowed to superintend the opening up of East New Lovell, an adjoining sett, till it became necessary to appoint a resident agent. Capt. Priske was highly eulogised by several shareholders for his ability and integrity; and he, on his part, promised that the interest of New Lovell should not in any way suffer through his oversight of East New Lovell.

A vote of thanks to the Chairman and committee of management concluded the business of the meeting.

The adventurers then dined together, Mr. HILL again presiding.

The loyal and patriotic toasts having been duly honoured,

Mr. C. BAWDEN proposed the "Health of the Committee," coupling with the toast the name of Mr. Frederick Hill, the Chairman. They were all proud of having Mr. Hill as their Chairman, and were, moreover, deeply indebted to him for the manner in which he had stuck to the mine, and helped to bring about its present success. He (Mr. Bawden) was glad to see that Mr. Hill had taken up the subject of the Stannary Laws, in concert with other gentlemen, and was devoting his practical mind to their reform. (Applause.) He (Mr. Bawden) had given a great deal of attention to the subject, and his advice would be—abolish the Stannary Court altogether. (Hear, hear.)

The CHAIRMAN, in returning thanks on behalf of the committee, said he could

not agree with Mr. Bawden as to the advisability of doing away altogether with the Stannary Court. On the contrary, he considered that the existence of a local mining tribunal was of immense benefit to the county. It was not the Court itself which they had to complain of, but that the machinery of the Court was not such as to give speedy relief to suitors. (Hear, hear.) The great benefit of the County Court system was that it brought justice to the doors of the people, not only cheaply, but expeditiously, and that was the very thing the miners of Cornwall wanted, instead of the present intricate, slow, and costly system. (Hear, hear.) He did not attend the county meeting held at Redruth in respect to the reform of the Stannary Laws, because he was not quite satisfied as to the object in view, but his name had been placed on the committee for drawing up a proper measure of relief, and after the explanation given at the meeting of the objects sought to be attained, he had great pleasure in acting upon it. They could not effect any change without an Act of Parliament, and it would be the duty of the committee to frame an Act which would meet all the requirements of Cornish mining. More than 30 years ago the late Mr. Paul and himself were called upon to advise as to the construction of an Act which was then passed, but which, owing to the intricacies which had since crept into its operation, and other circumstances, no longer met the requirements of the county. He was quite satisfied that, so far as the Duchy authorities were concerned, every assistance would be given towards effecting the objects for which the committee had been constituted. From what he knew of the secretary and of Mr. Warington Smyth he had every reason to believe that the Duchy was anxious to do everything in its power to promote fair and legitimate mining in the county. The authorities of the Stannary Court, too, the Vice-Warden, the Registrar, and the Secretary, had each expressed his anxiety to co-operate in every way with the committee in obtaining that immediate relief to which the mining interest was entitled. (Applause.) Then, the constitution of the committee was, he hoped, a guarantee that the reform would be thorough and practical; its Chairman, Mr. Bolitho, was certainly not surpassed, if at all equalled, as a man of business tact and ability, by any person in Cornwall, and he was supported by a large number of gentlemen practically acquainted with the working of mines, and with the inconveniences of the present Stannary system. Mr. St. Aubyn, one of the members for West Cornwall, was very zealous in the matter, and would take charge of a Bill to be brought before Parliament at as early a date as possible, and, no doubt, the other county and also the borough members would assist Mr. St. Aubyn in the House. It must be understood that no person found fault with the officers of the Stannary Court; indeed, it was well known to persons having business in that Court that the officers were very much overworked. Mr. Smirke was a man of great learning and ability, and Mr. Michell was one of the most hard working and industrious men he had ever met; but he (the Chairman) could not conceal from himself the fact that the operation of the Stannary Laws had the effect of preventing capitalists from investing their money in Cornish mining. Cornwall did not possess capital enough to develope its resources, and, therefore, they ought to hold out every inducement to capitalists to come to the county, but one of the most necessary conditions was confidence, and that was the very thing which the operation of the Stannary Laws destroyed. The Cost-book System, on the face of it, enabled a man to retire at any time from a mine by transferring or relinquishing his shares. But, if a mine came to be wounded up, a person who believed himself free from all connection with the mine might be called upon under the Winding-up Act to render an account for six years back. Now, that he considered to be a monstrous and intolerable state of things, for though a person might not in the end have to pay anything, still there was a considerable amount of unnecessary annoyance and trouble. He proposed that an adventurer who had transferred or relinquished should only have to go back one year, as under the Joint-Stock Companies Act. He believed that would be quite enough, and he hoped it would be carried into effect, though a majority of the committee was in favour of rendering an account for two years, and this could not be any hardship to the creditor, because the accounts were held quarterly, and he could always see who the shareholders were, and judge for himself whether he should press for his debt, and continue to supply the mine with materials. Changes in the law were also required for making calls. The Vice-Warden had decided that according to the law a majority of the shareholders must be represented in person or by proxy at a meeting before a call can be made. Now, he (the Chairman) maintained that if proper notice was given to the shareholders of the day when the meeting was to be held, and of the intention to make a call, if they did not choose to attend or send their proxies it was no hardship upon them that a necessary call should be made. It might suit dishonest people, who objected to pay to absent themselves from the meeting in order that no call could be made, and thus lead to the stoppage of the works through the inability to obtain money to carry them on. Therefore, he held that the majority of adventurers present should have power to make a call. (Hear, hear.) There were many other alterations required, and if they succeeded in obtaining an Act which would embody them all, the Stannary Court would become, as it had been formerly, a great boon to the county. Its meetings might be held monthly, like the County Courts, instead of quarterly as at present, and then we should have immediate relief. A further adaptation of the County Court system in holding its meetings alternately at different towns in the county would render it a still more perfect means of redress. (Applause.) At any rate, he could assure them that whatever change was effected by the committee it would be in the interest of mining generally. It was, necessary, however, that the committee should represent public opinion—that was, the opinion of the mining public, and they were, consequently, anxious to receive suggestions from adventurers and others interested in mining. Speaking as he then was in the presence of the representative of a large number of gentlemen in London and other places at a distance, who were deeply interested in mining, he hoped the wishes of the committee would be conveyed to them, and that if they had any suggestions to make in the interest of distant adventurers they would communicate with the committee as soon as possible. With regard to New Wheal Lovell, he could only say that so long as the adventurers were content with the services of an unpaid committee instead of those of a purser, they would be willingly rendered. The committee were deeply interested in the success of the mine, and they had great pleasure in welcoming as one of their body a representative of the great Cornish house of Williams, in the person of Mr. Frederick Martin Williams, M.P. for Truro. (Applause.) The earnest of future success was, therefore, very encouraging. They had stuck to the mine through the most depressing and discouraging circumstances; they had clung to it throughout the monetary panic and the prolonged depression in mining produce, and he hoped they were now about to meet the reward which they merited. (Applause.) The profit which they had realised during the past quarter would, he believed, continue to increase. Indeed, so much confidence was felt in the character of the ground which they were working that the manager, Mr. C. Bawden, had taken up the adjoining sett, into which the lodes were running, and was determined to work it under the name of East New Lovell. He might have kept the sett to himself, but thinking it only fair to the old shareholders in New Lovell, a certain portion of the shares in the new venture was offered to them. A good many had thus been disposed of, and the remainder had been taken up by a capital constituency in London. The working of East New Lovell was being carried on vigorously under Mr. Bawden's direction, and he hoped the district would be still further developed. He believed that the rise in the price of tin, unprecedented at this season of the year, and the very healthy appearance of the market, would have a most beneficial effect upon mining, and that the county was about to emerge permanently from the cloud under which it had been so long obscured. He did not, however, wish for too high a price, which might lead to evil; but with tin at from 65*l.* to 70*l.*, and improvements in the economical working of mines, they might hope to live and prosper. (Applause.) Having mentioned Mr. Bawden's name in connection with East New Lovell, he could not refrain from drawing their attention to the debt of gratitude which the shareholders in New Lovell owed him. He came to them at a time of great distress, and almost despondency. He examined the mine for himself, at once took a large interest in it, got the shares out in the market, and by his skill and energy in the management had brought the mine to what they now see it. (Applause.) As a proof of the legitimate and admirable manner in which the mine had been developed, he might mention the fact that Mr. Simmons, the Duchy agent, and Mr. Warington Smyth, had spoken to him in the very highest terms of the way in which the underground workings were carried on. (Applause.) He must not, however, omit to mention the great skill and honesty of their resident agent, Captain Priske. There was no industrial enterprise in which confidence was so essential between the shareholder and agent as mining. The meetings being only held quarterly, and the operations being carried on underground, the responsibility of the agent was very great. The success of the venture must, indeed, in a great measure depend upon the integrity and capacity of the agent; and Capt. Priske possessed, he believed, both qualifications. In conclusion, he had great pleasure in proposing "Prosperity to New Lovell Mine," coupled with the "Health of Mr. Charles Bawden," to whom the mine was so deeply indebted. (Applause.)

Mr. CHAS. BAWDEN, in responding, congratulated the adventurers on having come to a turning point in the history of the mine. They had now a balance on the right side of upwards of 200*l.*, and he had the strongest reason to hope [illegible] long the balance, instead of hundreds, would be thousands. (Applause.) Indeed, he thought he could even then see his way clear to promise a good dividend, though he had not done so, from a desire not to be over confident. He felt very much the flattering manner in which he had been spoken of, and was deeply sensible of the confidence reposed in him by the shareholders, and he hoped he should never forfeit that confidence. The high opinion which he had of the mine, and, indeed, of the whole district, was plainly evidenced by the fact that he had, as had already been mentioned by the Chairman, started a new mine on the adjoining sett—East New Lovell, and he did not intend to stop there, because he believed that to be one of the best districts in the county of Cornwall. (Applause.) It had, moreover, this great advantage—it would not cost much to prove it, inasmuch as 5000*l.* would go as far there as 25,000*l.* in any other district. (Renewed applause.)

Other toasts followed, the adventurers generally expressing themselves much gratified with the appearance and prospects of the mine.

PESTARENA UNITED GOLD MINING COMPANY.

An extraordinary general meeting of the shareholders will be held on Wednesday.

The report of the directors states that the accounts received from the mines in the early part of this year led them fully to expect that the revenue for the year would have shown a considerable profit for division among the shareholders. As, however, the working results up to May last did not confirm their expectations, they determined immediately to obtain the independent opinion of some practical mining engineer, and they, therefore, engaged the professional services of Mr. Arthur Dean, to inspect and report upon the mines and works belonging to the company, and also to examine into all the details of the working processes and management. Mr. Dean accordingly proceeded to the Vallanzasca, and after a close and careful examination, which occupied him the greater part of four months, he sent in his report, dated September 18. Simultaneously with the receipt of Mr. Dean's report, the directors were apprised of the decease of the managing director in Italy, and they cannot allow this opportunity to pass without expressing their sense of the great zeal and energy at all times displayed by him in the company's services. Some members of the board were immediately deputed to visit the mines and examine into the state of the company's affairs, and make all necessary arrangements for carrying on the business without interruption. The late managing director's accounts were found perfectly regular and in good order, and they ascertained that the measures which had been taken to repair the damages occasioned by the great flood in August, and to provide against the recurrence of similar disasters, were in active progress. But towards the end of September (when they arrived in Italy) they found that the whole of that part of the country had been inundated by a second flood; and, fearing that still further damage might have been occasioned at the mines, they at once sent for Mr. Dean—whose thorough knowledge of the affairs at the mines enabled him to act promptly—and instructed him to proceed to the Vallanzasca, to make all such arrangements as he might deem fit for carrying on the workings at the mines, and for the protection of the company's property, and they further authorised him to concentrate the expenditure upon immediately productive operations, and the opening out of the resources of the underground department. It is stated in Mr. Dean's supplementary report that considerable success already has resulted from this policy. The floods, which were of a magnitude quite unprecedented in the Vallanzasca, occasioned serious damage to the mines and works in the Pestarena district, and to a less degree in the Battigio and Val Toppa districts. The falling off in the production of gold during the first half of the year, and the further loss of important supplies of ore during the second half, in consequence of the floods, have rendered it evident that the revenue account will exhibit a deficit upon the operations of the year. In Mr. Dean's report of Sept. 18 he estimates that to complete the works which have been projected, with the object of reducing the present expenses of transport and of treating the ores, and the cost of working the mines, &c., will require an outlay of 15,000*l.* In the judgment of the directors it will be more prudent that the sum to be raised should not be less than 20,000*l.*, and after much consideration they have resolved to submit a proposal to raise the sum of 20,400*l.*, by the creation and issue of 6800 shares of 3*l.* each, bearing a preferential dividend of 12½ per cent., with an option to the company to redeem them at any time after the expiration of five years from the date of issue, at a premium of 1*l.* per share, and an option on the part of the holders to renounce at any time their preference shares and take ordinary shares. The 6800 shares will provide one for every ten shares already issued, and they will, of course, be offered *pro rata* to existing shareholders. The amount payable on deposit will be 1*l.*, and future calls will be made as required, but not oftener than at intervals of four months, nor of a greater amount than 10*s.* per share each call. According to Mr. Dean's supplemental report, the profits to be made in 1869 will amount to 12,000*l.*; about one-fifth of this (2550*l.*) would be sufficient to provide for the interest payable to the holders of preference shares; and when the projected works are finished—for which the additional capital is required—the saving in working cost alone, without any increase in the production of gold from the mines, is estimated to amount to a larger annual sum than would suffice to meet such interest. It will, therefore, be seen that the preferential dividend of 12½ per cent. will be amply secured. Mr. Dean will be present at the meeting, and will afford any further information.

The supplemental report of Mr. Arthur Dean, C.E., states that the response of the Val Toppa and Pestarena Mines to the vigorous measures taken to lay open their resources within the last four months, that the whole reduction of 170 ozs. per month has been made good by the new discoveries, and the average produce of the four months has been 884 tons, worth 38*s.* 4*d.* per ton, and yielding 505 ozs. of gold per month. The mines have, therefore, really improved by 170 ozs. of gold per month during the last four months, and when the resources of the great shoot in the Peschiera Mine are again available, the monthly produce may be expected to rise to 650 ozs., and gradually to increase to 1000 ozs. in June. There is so much heavy and absolutely necessary work to be done, both at the surface and underground, to make the full resources of the mines available, and to provide the means for economic working, that he would not place the profit in excess of all working and ordinary construction expenses at a higher amount than 12,000*l.* in 1869. During that year, if funds be provided, the greater portion of the new works required, costing 15,000*l.*, may be executed; and, in the meantime, the work of laying open good reserves of ore will proceed, so that with increased raising on the one hand, and economy of working expenses on the other, there is a satisfactory prospect of a 15*l.* per cent. dividend on 225,000*l.* for 1870. Upon the promptitude with which the additional funds required are furnished, the realisation of that expectation will, in a great measure, depend.

VAL ANTIGORIA GOLD MINING COMPANY.

A general meeting of shareholders will be held on Thursday.

The report of the directors, to be submitted, states that in June they engaged the services of Mr. Arthur Dean, C.E., who was then in Italy, to inspect and report upon the mines and works, and also to examine into all the details of the working processes and management. His report affords full and reliable particulars of the property; and it will be very satisfactory to learn that, in Mr. Dean's opinion, the mine is one of great promise, and although not likely to be brought into a state of profitable working so soon as the shareholders have been hitherto led to expect, will eventually, with a comparatively small additional outlay, yield satisfactory returns.

FOREIGN MINING AND METALLURGY.

The Austro-Belgian Metallurgical Company has just presented its annual report. It appears that the production of lead and zinc increased in 1867-8 to 6816 tons, as compared with 5665 tons in 1866-7. The profit realised by the company did not follow an equally progressive course, although improvements introduced into the manufacture counterbalanced, to some extent, the depreciation in prices. Economies were also realised in 1867-8 under the heads of law costs and expenses of the financial service to the extent of 853*l.*, as compared with 1866-7. The net profits realised in 1867-8 amounted to 5103*l.*, but from this deductions were made for redemptions, reserves, &c., amounting in the aggregate to 2744*l.* A "fund of foresight" created in 1864 remains fixed at 3312*l.*

The rise noticed recently in Chilian Copper at Havre has been maintained, although the demand for Chilian in bars has become somewhat more quiet. The sale is noted of 105 tons of disposable and deliverable at the end of December, at 73*l.* 10*s.* to 74*l.* per ton; of 50 tons deliverable at the end of January, at 73*l.* 16*s.* to 74*l.* per ton; of 67½ tons deliverable at the end of December, at 73*l.* 8*s.* to 73*l.* 10*s.* per ton, Paris conditions, as well as of 25 tons deliverable at the end of January, at 73*l.* 12*s.* per ton, Paris conditions. At Paris there has been continued firmness in quotations; Chilian in bars has been quoted at 74*l.*; Chilian in ingots, 78*l.*; and Corocoro minerals, 76*l.* per ton. On the German and Dutch markets quotations for copper remain much the same, but, upon the whole, there has been an upward tendency. As regards tin, it may be noted that previous rates have been readily supported, Banca being quoted at 112*l.* per ton, and Straits at the same rate. At Marseilles the state of the tin market has been satisfactory, without, however, any great variations in quotations. At Berlin the demand has been very active. At Amsterdam there has also been a rather active demand for Banca, and as much as 63¼ fls. has been paid, as compared with 62½ fls. a week previously. At Rotterdam, also, the tendency has been very favourable, and some important transactions have been concluded in Banca, at 62½ fls. to 63¼ fls. English and Spanish leads have made 19*l.* per ton. At Paris, French, Belgian, and German leads have also brought 19*l.* per ton. At Marseilles lead in saumons, first fusion, is quoted at 17*l.* 14*s.*, and rolled and in pipes 20*l.* 12*s.* per ton. On the German markets lead quotations present no variations. Quotations for zinc remain firm, but the demand is moderate. At Havre Silesian has been quoted at 20*l.* 16*s.*, and other marks at 20*l.* 4*s.* per ton. At Paris the same qualities are quoted at 20*l.* 4*s.* per ton. At Berlin the tendency of the market has been towards improvement.

The total quantity of gas sold by the Belgian General Company for Lighting and Heating by Gas—which has works at Arras, Bruges, Cambrai, Catana, Charleroi, Chemnitz, Dunkerque, Fourmies, Herstal, Louvain, Marchienne-au-Pont, Prague, Rimini, St. Omer, Sienna, Tournai, and Valenciennes-Anzin—amounted in September, October, and November, 1868, to 92,839,023 English cubic feet, as compared with 87,672,049 English cubic feet in September, October, and November, 1867, showing an increase of 5,166,974 English cubic feet. The Belgian coal trade displays little change; industrial qualities have easily maintained the prices which they had acquired, but qualities used for domestic consumption have been rather less sought after, in consequence of the exceptional mildness of the weather. The Belgian Syndicate of Forgemasters has been broken up; constituted in 1862, this association is considered to have been very useful to Belgian metallurgical industry during the last seven years. It comprised five works—Sclessin, Couillet, Châtelineau, Monceau, and Thy-le-Château; and the object of the combination was to place the national industry in a better position as regards foreign competition. The representatives of the Syndicate, having the production of five considerable establishments at their back, followed attentively the course of markets, and sought out contracts with railways and other consumers. The orders obtained were then distributed among the syndicated works, each of which thus obtained a complete representation abroad, the cost of which, being shared in common, did not exceed reasonable limits. Further, rivalry was avoided between the works forming the Syndicate. It seems now, however, to have been thought that the Syndicate had had its day, and had answered its purpose—first, because the conditions of foreign competition had been modified of late years; and, secondly, because the very principle of the Syndicate had become vitiated with time. The Belgian rolling-mills are pretty well supplied with work. A contract for 18,000 tons of rails has, however, been carried off by English firms for the Grosswardein Railway (Hungary). A Bavarian house will construct 12 locomotives for the same line; 500 goods trucks will be made in Austria. The market for pig has somewhat hardened in Belgium; refining is quoted at 2*l.* 16*s.* per ton, and even at a somewhat higher rate for contracts involving further deliveries; casting—good quality, No. 3—is worth about 3*l.* 2*s.* per ton, with an upward tendency. The lowest tender sent in for the construction and erection of the metallic part of a great bridge over the Hollandsche Diep, at Moerdyk, on the Dutch State Railways, was that of Messrs. Viessingen and Van Heel, of Amsterdam, 146,674*l.* Among the English tenders sent in for this work may be mentioned the Newcastle-on-Tyne Iron and Coal Company, 240,000*l.*; the Butterley Company, 204,000*l.*; Messrs. T. Brassey and Co., Birkenhead, 198,532*l.*; Messrs. Vignoles, of London, 168,750*l.*, &c. At a recent adjudication of contracts for plant and *materiel* for one of the Belgian railways, Messrs. John Brown and Co. (Limited), of Sheffield, tendered for one lot of 693 hammered iron buffer pistons for goods trucks at 484*l.*, and for another similar lot at 499*l.*

At a meeting of forgemasters recently held at Paris the state of the French iron trade was admitted to be favourable, work being assured, at any rate, for the first few months of the current year. First-class rolled iron from coke-made pig is quoted at 8*l.* per ton, with a scale of 8*s.* per ton per class. In the Moselle district refining pig has risen about 1*s.* per ton, and the pretensions of forgemasters are expected to be carried still further; castings continue in good demand. Charcoal-made pig has been dealt in the Haute-Marne at 4*l.* 4*s.* per ton at the works. The price of castings, which has not progressed so much as that of other metallurgical products, now shows a decidedly upward tendency. It appears that the extraction of coal effected by the Ahun Collieries Company during its last financial year was 472,000 tons; the whole of this production was disposed of. In the first year of its existence the company only effected an extraction of about 12,000 tons, so that it will be seen that the undertaking has made very great progress of late. The excess of the receipts over the working expenses last year was 14,629*l.*, from which was taken 8398*l.* for interest on loans contracted by the company, leaving a balance of 6231*l.* Of this sum, again, 3012*l.* was carried to the credit of the redemption account, in accordance with a previous decision of the shareholders. The final balance of 3219*l.* might have been distributed among the shareholders, but they resisted the temptation of a dividend, preferring to see the enterprise established on a firm and large basis, and they adopted a proposal made by the Council of Administration to apply the 3219*l.* to the execution of new works, which are expected to endow the undertaking with new elements of prosperity.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

WEST WHEAL TREMAYNE.—The prospects of this mine are steadily and progressively improving. The ground in the engine-shaft is becoming more compact, and congenial for the production of ore, and the branches of the lode therein being worth over 1 ton of good ore per fathom, and converging, so that in depth a good course of ore is confidently looked for so analogous to the same lode in Wheal Squire, where such large quantities of ore were raised, and profits made. The 20 west, on the south lode, is also entering good ore ground, and there are other points of promise, showing every indication of shortly adding considerably to the samplings. The operations here are being carried out in an efficient and practical manner, and from the many favourable features of the points now being developed, there seems every probability that this hitherto neglected property will soon take a high position.

NORTH LEVANT.—We learn, upon good authority, that the adventurers are about to receive a dividend.

NORTH JANE.—This tin mine is looking much better. Shares are 5*s.* to 7*s.* 6*d.* each. The mine adjoins and embraces the same lodes as Wheal Jane, shares in which were 2*l.* in 1867, but now 45*l.*, and paying dividends.

Of all the mines now opening in Cardiganshire there is not one of a more healthy aspect than the VALE OF RHEIDOL MINES—in fact, these are two mines on the point of being connected together by underground workings upon a large lode of silver-lead ore, containing so much silver that the ore brings nearly 20*l.* a ton in the market. I have examined the lode in both mines, and found it to be on an average about 7 feet wide, composed of good ribs and divisions of ore, from 1 to 2 feet thick. The distance from one to the other is not much short of 200 fathoms, and, inclusive of the ore ground in both mines, the length of the ore ground may be considered to be fully that distance. There are now about 70 to 80 fms. of whole ground between the two mines, one of which is called Abernant, and the other Twoedyrhiwcaer, and it it may be said, without fear of contradiction, that a good lode of ore runs through this ground. The mine is well supplied with machinery for crushing and dressing the ore. Hitherto it has suffered in summer from a dearth of water, all the contributories of the Rheidol and the upper bed of the river itself lies above these mines, and may be readily diverted to work the machinery. When this is done I believe that the mines will accomplish good and regular sales of ore, and liberal profits for the capital. I am now speaking of the upper sections of the grounds above the adits, which are now high and dry for working. When the deeper ore ground is laid open I believe that the company may fairly expect very large returns, and that the Vale of Rheidol Mines will prove as good as any mining property in the silver-lead district of Cardiganshire.

NANGILES MINE.—They have a large quantity of tin ground here, and the late rises in tin will enable them to take away a considerable quantity of metal. Altogether, the prospects of this property were never so favourable as at the present time. Being in the richest mining district in Cornwall, it can hardly fail to become one of the most profitable mines in the county. There are only 1024 shares, and at 9*l.* to 10*l.* they are well worth attention.

OKEL TOR MINE.—A correspondents informs us that much dissatisfaction exists amongst the shareholders at the determined obstinacy of the committee of this mine not to call a general meeting, in utter violation of their own rules, which state that meetings should be held every two months. The debts of the mine are represented to be considerable, and the general feeling is that a meeting should be held in London forthwith, and a call made to liquidate the long-standing liabilities.

LISBURNE CONSOLS.—These mines, consisting of Hendrefelin, Bwlch Hendre, and Craig-y-Bwlch, to the west of the Lisburne Mines, and formed in a rock that produces more silver than any of the Lisburne Mines proper, are upon the same lodes as Glogfach and Glogfawr Mines. The Glogfach Mine is a vein of exceedingly solid lead, containing a large quantity of silver. The ore is found in the vein for the width of about 2 ft. The ore brings in the market about 16*l.* per ton, and is so solid and abundant in the vein that a very large quantity of it has been raised at the small cost of about 10*s.* per ton, leaving almost the whole of the ore money in the shape of profit. This ore has been found in such a very compact state that 1 fm. on the superfices of the lode, 2 ft. wide, has been known to yield as much as 8 tons of ore, or 128*l.* worth of lead and silver, which has been extracted for 3*l.* Under those conditions it is impossible to imagine richer veins than those of the Lisburne Consols: it would be unreasonable to hope to find lodes that are capable of yielding larger profits. The Lisburne Mines, on an outlay of 7500*l.*, have realised in 30 years a sum of over 200,000*l.*; and their riches and permanence is so great that, notwithstanding the large returns and profits, the value of the mines is now greater than ever. The Lisburne Mines lodes are well known to run through this ground, and with these great advantages the Lisburne Consols are now undertaken, with large masses of ore cropping out of the lodes at the very surface.

TAMAR VALLEY.—The recent operations at this mine have been of a most satisfactory nature; the mine is now clear to the bottom, and tributers are now at work raising silver-lead and fluor-spar.

WHEAL MARY FLORENCE.—They have a pretty pile of ore on the floors, and are busy dressing for their sampling—estimated 30 tons. The character of the stuff being hauled up the shaft is everything a miner can desire. This mine is well worthy the attention of the investing public, as being very likely to take a good position in the list of productive mines.

COLQUITE AND CALLINGTON.—A telegram has been received stating that the engine is at work and water forking well. The appearances are of a highly satisfactory nature, and the probability is that something of a very favourable character will shortly be met with.

WEST ST. IVES.—This mine has been inspected by one of the most able tin miners in Cornwall. His report confirms the statements previously made, and fully calculates on a very favourable result in the future.

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for November is 22. They have consumed 1901 tons of coal, and lifted 14·3 million tons of water 10 fms. high. The average duty of the whole is, therefore, 50,900,000 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Carn Brea—76 in.	Millions	52·0
Cook's Kitchen—50 in.		53·5
Great North Downs—Sleggan's 70 in.		72·6
Great Work—Leeds' 60 in.		62·4
North Roskear—Doctor's 70 in.		54·6
North Wheal Crofty—Trevenson's 80 in.		69·3
South Wheal Frances—Marriott's 75 in.		56·7
West Chiverton—Hawke's 80 in.		60·9
West Wheal Seton—Harvey's 85 in.		59·2
Wheal Seton—Tilly's 70 in.		65·7

THE CORNISH MINE SHARE MARKET.—The first week in the new year has not brought with it any great increase of business in the Cornish Mine Share Market, which since our last report has only been moderately active. This, however, is more owing to a general scarcity of stock and tenaciousness on the part of holders, even with the temptation of higher quotations, than to any feeling indicating a lesser degree of confidence in the permanency of the late advances in tin and copper. Indeed, the market for both these metals has during the week shown much vitality, and a tendency of prices in the right direction. From every quarter we hear of increased hopefulness and expectations that the year on which we have just entered will prove to be much more prosperous, both for the working miner and the shareholder, than the one which has just expired. Transactions and enquiries in the share market since last week have principally been in connection with the following stock, the quotations of a majority of which will be found to compare favourably with last week's rates:—New Lovell in good demand, at 42*s.* 6*d.* Tincroft, buyers 17¼. Cook's Kitchen firm, at 13¼; the meeting will be held on Wednesday next, when we hear a dividend of 5*s.* per share will be declared. West Frances steady, at 4*l*; at the meeting next Thursday a profit of about 400*l.* is looked forward to, but in consequence of some additions being wanted to the stamping-machinery no dividend will be declared. Rosewall Hill improved to 20*s.*, buyers. South Crofty also better, and enquired for at 14. North Treskerby, 16*s.*; East Lovell, 9½; Great North Downs shares, 40*s.*, buyers. West Seton shares remain at 185. Wheal Seton, 65. Since the meeting of Wheal Uny, held on Thursday last, when the profit was not divided among the shareholders, as was anticipated, but applied—and wisely we think—to place the mine in a better financial position, shares have been slightly depressed, and transactions have been fewer than usual; the quotation now stands at 3⅜; Carn Brea quiet, 22; East Caradon, 7. Prince of Wales rallied two or three days ago to 28*s.*, but have since receded to 25*s.*; East Grenville, 3¼; Emily Henrietta slightly enquired for at 20*s.*; South Condurrow, 16*s.*; Wheal Jane, 40; Wheal Kitty (Lelant), 5½; Wheal Kitty (St. Agnes), 4; Providence, 32½. New Seton, 67½; at the meeting, on Tuesday, a call of 2*l.* 10*s.* per share was made. Chiverton, 4½; West Chiverton, 58; Chiverton Moor, 8. —*West Briton.*

SOUTH AUSTRALIA.—"Port Mannum, on the River Murray, Oct. 24.—The crops along the plains at Palmer, belonging to the tenants of the Australian Mining Company, are looking well, considering it is the first yield of the ground. I will inform you more fully as to this locality in my next. As a general rule, the over indulgence of any weakness brings about its own evil consequences, and a weakness for colonial wine is not an exception. With one licensed house to vend this native industry we were pretty quiet, but now the magistracy at Mount Pleasant have, with a due consideration for the public purse, granted another, and now the public are left to suffer the annoyance caused thereby. The sale of this admirable liquor is not confined to whites, but is in some localities extended to the native blacks, through some indirect means. The latter are frequently seen, in a state of intoxication, rolling about the place. The peace and quiet of the people are disturbed at most unseasonable hours in the night, and the Sabbath is desecrated and turned into riot and revelling by these worshippers of Bacchus, black and white. With the memory of the Rainbird tragedy still fresh in our minds, how can anyone be so foolish as to supply these natives with drink? We cannot avoid apprehending similar consequences if the Government do not supply us with police protection as a preventive. If a trooper came here on Saturday until Monday it would do good. The nearest police station is at Mount Pleasant, some 23 miles distant. The Moolgewanke steamer arrived today from the Upper Murray, with 437 bales of wool, which are consigned to this port. She reports there are still no indications of the River Darling rising."—*Adelaide Observer.*

CHANNEL RAILWAY BRIDGE.—Marshal Vaillant, Minister of the Emperor's Household, and of the Fine Arts, has given a site on the territory of the Depôt of Marbles, for the erection of the model of the railway bridge from Calais to Dover. The model is about to be erected.

South Polberrow Tin Mining Company,

SITUATED IN ST. AGNES, CORNWALL.

Divided into 3000 Shares on the Cost-Book System.

The Committee of Management will be chosen at the First General Meeting of Shareholders.

BANKERS—LONDON AND SOUTH WESTERN BANK, 29, LOMBARD STREET, LONDON, E.C.

SOLICITOR—FREDERICK WM. SNELL, ESQ., 1, GEORGE STREET, MANSION HOUSE, E.C.

CONSULTING ENGINEER—JOSIAH HUGO HITCHINS, ESQ. (Consulting Engineer to the Devon Great Consols).

SECRETARY—JAMES FAIRBAIRN, ESQ.

OFFICES,—160, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

PROSPECTUS.

This valuable tin mine, South Polberrow, is situated in the Parish of St. Agnes, one of the best tin districts in the county of Cornwall.

The sett is bounded on the west by Great Wheal Charlotte, which yielded large profits; on the east by Polbreen; and on the north by Wheal Friendly, Wheal Trevaunance, Polberrow, Wheal Kitty, and other celebrated tin mines. It is traversed by the productive lodes of Polbreen and Wheal Kitty, the latter paying regular dividends, and lies parallel with the enormously productive lodes of Polberrow, and other rich mines of the district.

In this sett there are no less than thirteen well-defined veins or lodes, all of which have produced large quantities of tin, and afford evidence of a highly mineralised property. A fine "cross-course" is in immediate proximity to that part proposed to be opened up, which can be rendered advantageous for cross-cutting to the various lodes.

A shaft has already been sunk 40 fathoms deep, which communicates with an adit driven on the course of one of the lodes, and which has been extended about 50 fathoms into the sett from the eastern boundary. In this adit for about 30 fathoms in length, the lode has been taken away on tribute, the excavations even reaching the surface.

The mine has been inspected by practical agents, whose reports fully warrant the shareholders in expecting most satisfactory results.

The peculiar advantages presented by this mine are—first, its geological position, being situated on the junction of granite and killas, one of the most important features in the mineral-bearing districts of Cornwall. Four-fifths of the rich mines in the county are similarly placed, as shown in the following table:—

MINES SITUATE ON THE JUNCTION OF GRANITE AND SLATE.

Name of Mine.	Outlay.	Dividends.
Botallack	£ 18,250 0 0	£ 97,750 0 0
Carn Brea	30,000 0 0	280,500 0 0
Dolcoath	46,137 5 0	306,985 0 0
East Basset	18,944 0 0	67,512 0 0
Providence	11,568 13 4	95,900 0 0
St. Ives Consols	10,105 0 0	461,070 0 0
South Caradon	640 0 0	308,490 0 0
South Frances	9,293 0 0	185,838 16 0
Tincroft	54,000 0 0	120,300 0 0
Tresavean	4,080 0 0	449,064 0 0
West Basset	10,500 0 0	160,206 0 0
Wheal Basset	2,624 0 0	323,820 0 0
Wheal Buller	14,464 0 0	237,824 0 0
Total	£230,605 18 4	£3,095,253 16 0
Total dividends		£3,095,253 0 0
Paid-up capital		230,605 18 4
Balance		£2,864,647 17 8

Profits in excess of paid-up capital, £2,864,647 17s. 8d., irrespective of present market value of shares.

Secondly: The lodes traversing the sett have proved very rich in the mines immediately to the east and west of the boundary; while the workings in the grant have already opened upon good courses of tin, similar to those found in the mines to the east and west at the same depth, thus placing its value beyond doubt.—Thirdly: The mine can be worked to a considerable extent without the aid of expensive machinery, there being sufficient water-power for all practical purposes; and the rich lodes can be opened upon by the driving of adits about 60 fathoms deep, an advantage seldom met with in Cornwall.—Fourthly: It is within two miles of the shipping port of St. Agnes, rendering the shipment of ore easy, and the carriage of materials cheap.

From what has been stated, it is obvious that the sett contains the great elements of success; it is surrounded by rich mines: there are several lodes of an unusually rich description traversing its entire length; the produce of tin has been rich and profitable; and there is a certainty that a further small outlay would place it amongst the richest mines of the county.

The sett is held under lease for 21 years (from 14th December 1866) from his Royal Highness the Prince of Wales, as Duke of Cornwall, at a minimum rent of £20 per annum, to merge into the royalty of one-fifteenth of all the tin sold prior to the erection of an engine, and one-twentieth afterwards.

The company has been formed upon the Cost-book System, and a call of £2 per share has been made.

The present proprietors agree to take £2000 for the property, thus leaving £4000 for its development, which is considered amply sufficient to bring the mine into a profitable state of working. They have also signed the Cost-book for 250 shares, being an 8th.

Some fine specimens of the ore may be seen at the offices of the company.

Prospectuses, plans, forms of application for shares, and every information, may be obtained of the secretary, together with copy of rules and regulations of the company.

THE SOUTH POLBERROW TIN MINING COMPANY.

In 3000 Shares, on the Cost-book System.

FORM OF APPLICATION FOR SHARES.

To the Committee of the South Polberrow Mining Company.

GENTLEMEN,—Having paid to the bankers of the company the sum of £ , £2 per share, on shares in this company, I hereby apply for that number, and agree to accept such shares (or any less number), and I hereby authorise you to place my name on the Cost-book and Register of shareholders of the company.

Usual signature .....
Name in full .....
Residence .....

Date.....

N.B.—Priority will be given to the earliest applicants for shares.

BANKERS' RECEIPT.

THE SOUTH POLBERROW MINING COMPANY.

Received this day of , 1869, from , on account of the committee of the South Polberrow Mining Company, the sum of pounds, being £2 per share for shares in this company.

£ : : For the London and South-Western Bank (Limited),
29, Lombard-street, London, E.C.

WATSON BROTHERS' MINING CIRCULAR

WATSON BROTHERS,

MINING AGENTS, STOCK AND SHARE DEALERS, &c.

1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

MESSRS. WATSON BROTHERS return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for 25 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mine or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

SATURDAY.—Good demand for Prince of Wales, at 25s. to 27s. 6d.; West Frances, 40 to 42½; Buller, 5 to 7½; Seton, 65 to 70; Tincroft, 17 to 18; Rosewall Hill, 17s. 6d. to 20s.; New Lovell, 2 to 2½; Carn Brea, 22½ to 25; and Grenville, 32s. to 34s. Great Retallack, 2½ to 2¾; West Chiverton, 58 to 60; Providence Mines, 32 to 33; Chontales, 1⅞ to 2⅛.

MONDAY.—Market active for New Lovell, at 2⅛ to 2⅜; Buller, 6 to 8; West Frances, 40 to 42½; Tincroft, 17 to 18; North Treskerby, 11s. to 13s.; Providence, 32 to 33; Rosewall Hill, 17s. 6d. to 22s. 6d.; Grenville, 32s. 6d. to 35s.; Prince of Wales, 25s. to 27s. 6d.; Chiverton Moor, 5⅜ to 5⅞; Wheal Chiverton, 4¾ to 5⅛; Chontales, 2 to 2⅛.

TUESDAY.—Market rather quiet. West Frances, 41 to 43; Grenville, 33s. to 35s.; Tincroft, 17 to 18; Rosewall Hill and Ransom, 17s. 6d. to 22s. 6d.; New Lovell, 42s. 6d. to 47s. 6d.; and Buller, 8 to 10, chiefly dealt in. Prince of Wales flatter, at 24s. to 26s.; North Treskerby, 15s. to 20s.; Chiverton Moor, 5⅛ to 6.

WEDNESDAY.—Active demand for Grenville, at 35s. to 40s.; East Grenville, 2⅛ to 2¼; West Frances, 41 to 43; Buller, 7½ to 10; Seton, 65 to 70; Rosewall Hill, 20s. to 25s.; North Treskerby, 17s. 6d. to 22s. 6d.; New Lovell, 2⅛ to 2⅜; Tincroft, 17 to 18; Providence Mines, 33 to 34; Prince of Wales, 25s. to 27s.; Chiverton Moor, 5⅛ to 6; Chontales, 2 to 2⅛.

THURSDAY.—Moderate demand for West Frances, Great Retallack, Tincroft, Rosewall Hill and Ransom United, North Treskerby, East Caradon, Grenville, and East Grenville shares, at the late advance. Chiverton shares receded to 3⅞, sellers; Chiverton Moor, 5⅛ to 6; Chiverton Valley, 3 to 3¼; Chontales Gold, 2⅛ to 2⅜; East Caradon, 7½ to 8; East Lovell, 9 to 9½; East Grenville, 3⅛ to 3¾; Frontino, 8s. to 10s.; Great Laxey, 19 to 20; Great Retallack, 2¼ to 3; Great Wheal Vor, 10 to 11; Marke Valley, 8⅛ to 8¾; New Lovell, 2⅛ to 2⅜; North Treskerby, 17s. to 19s.; Prince of Wales, 23s. to 25s.; Rosewall Hill and Ransom United, 20s. to 22s.; Tincroft, 17 to 18; West Chiverton, 58 to 60; West Frances, 41 to 42; Wheal Basset, 60 to 65; Wheal Buller, 7½ to 10; Wheal Chiverton, 3⅝ to 3⅞; Wheal Grenville, 34s. to 36s.; Wheal Kitty (St. Agnes), 4 to 4¼; Wheal Seton, 65 to 70; Don Pedro, 3⅜ to 3⅝; Taquaril, 10s. to 12s. 6d.

FRIDAY.—The demand for tin mines has increased to-day, owing to a rise of 2l. in tin. Rosewall Hill and Ransom United shares advanced to 25s; West Frances, to 43, buyers; East Grenville, 3⅛ to 3¾; Wheal Grenville, 34s. to 36s.; Great Retallack, 2¾ to 3; East Caradon, 7¾ to 8¼; Prince of Wales, 22s. 6d. to 25s.; West Chiverton, 58 to 60; Great North Laxey, 12s. 6d. to 15s.

THE MANUFACTURE OF WATCHES AND CLOCKS.—A most interesting and instructive little work, describing briefly, but with great clearness, the rise and progress of watch and clock making, has just been published by Mr. J W. Benson, of 25, Old Bond-street, 99, Westbourne-grove, and the City Steam Factory, 58 and 60, Ludgate-hill. The book, which is profusely illustrated, gives a full description of the various kinds of watches and clocks, with their prices, and no one should make a purchase without visiting the above establishments or consulting this truly valuable work. By its aid persons residing in any part of the United Kingdom, India, or the Colonies, are enabled to select for themselves the watch best adapted for their use, and have it sent to them with perfect safety. Mr. Benson, who holds the appointment to the Prince of Wales, sends this pamphlet to any address on receipt of two postage stamps, and we cannot too strongly recommend it to the notice of the intending purchaser.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending Jan. 3 amounted to 9835l. 5s. 10d.

Mining Correspondence.

BRITISH MINES.

BEDFORD UNITED.—J. Phillips, Jan. 7: We are sinking on the lode at the shaft. The lode in the 90 east is 3 ft. wide, worth from 4 to 5 tons of better quality ore per fathom. The lode in the 75 east is 4 ft. wide, worth 5 tons of ore per fathom. The stopes in the back and bottom of this level average about 4 tons of ore per fathom. The pitches throughout the mine are looking much the same as for some time past.

BUDNICK CONSOLS.—James Evans: The tributers' tin, referred to in my last report, will be sold to-day, I calculate at 60l. per ton; and within a fortnight another pare of tributers will sell a parcel of tin of better quality, and when the shaft is completed, and the level secured, I expect to have at least six additional men on tribute. We are putting our stamps in thorough repair, and as soon as the additional 12 heads of stamps are at work, our returns will considerably increase.

CAPE CORNWALL.—Richard Pryor, Francis Hosking, Jan 8: On Saturday last we set the following bargains:—The 100 fm. level cross-cut to drive north of engine-shaft by four men, at 9l. per fathom; the end is still in killas, which is thickly impregnated with mundic and copper ore, but we have not as yet cut the lode. The 70 fm. level cross-cut to drive south of this shaft by three men, at 13l. per fathom; the ground at this point has undergone a most favourable change, and is also strongly mineralised.

CARADON CONSOLS.—S. Bennetts, Jan. 5: The Clymo's lode, in the 78 west, is 1½ ft. to 2 ft. wide, somewhat disordered, yet containing some good ore, and producing saving work throughout. The main lode has not yet been met with in the 78 south, the ground however is getting easier. On the gossan lode there is not much further change during the week.

CASHWELL.—John Peart, Jan. 2: The drift going east below the Scar limestone is still very hard and slow to work, and not quite so good for ore as last reported. No. 1 stope is still producing a good deal of ore. The vein in the rise in the Slaty Hazle east is improving; it is 2 ft. wide, and well mixed through with ore, but rather hard to work. The men in the Slaty Hazle west are still working profitably. At Daukes we are making a rise in the Slaty Hazle; the vein is looking a little better, but it is very hard.

CEFN BRWYNO.—J. Paull, Jan. 5: The lode at the 92 east is without any particular change since my report of last week, and yields 10 cwts. of lead ore per fathom. The same level west continues to produce good stones of ore at times, ground very hard for exploring. The 80, east of engine-shaft, is improving, producing good saving work, and indicates further improvement. At the same level west, no lode has been taken down since last reported on. This level is now extended under the sink below the 68, and we intend to commence drawing the water out next week, and sink the winze through to the 80 as quick as possible, in order to ventilate that level, and open out the ground for stoping. The 56, or deep adit level east, is in a very promising lode, producing good stones of ore occasionally. A great feed of water is now issuing from the end, and I have great hopes of something good being not far before us. There is nothing worthy of remark in the cross-cut north, at the 20, since last week; strings still crossing the end showing spots of lead. All points throughout the mine are being carried on vigorously. The blende is now all dressed up, and will be sold as quick as possible.

CUDDRA.—F. Puckey, A. Cundy, Jan. 6: In the 142, driving west of Walker's shaft, by the side of the lode, the ground is more favourable for progress. In the stope in back of this level, east of the winze, we are desuing the lode. In the 130 end, west of the shaft, we are driving on the lode, and carrying about 12 ft. of the lode, which is worth 30l. per fathom for that width. In the stope in back of the 130 we have begun taking down the lode, and shall report next week the size and value of the same. In the stope in bottom of the 100 fathom level, from the winze, the lode is 12 ft. wide, and worth 18l. per fathom for that width. The lode in the western stope, in back of the same level, is without alteration, still 9 ft. wide, and worth 15l. per fathom. In driving and cutting out the lode in the 100, east of the eastern stope, the lode is 9 ft. wide, and worth 20l. per fathom. Our additional 12 heads of stamps are now ready to work, and we are getting on with the enlargement of the dressing-floors as fast as we possibly can.

CWM DARREN.—Richard Clocker, Jan. 7: The last portion of the lode that has been sunk in the shaft has got into a very beautiful lode, much better than has ever yet been seen at the mine, and what we may very appropriately term a real good course of silver-lead ore. The sinking commenced to show a very decided improvement on Saturday last, and has continued to improve every day since. We are now squaring this last sinking, and a few days more will, I have no doubt, throw a still greater light on the matter. We had a drawing from the shaft yesterday, and some of this ore was sent up, in which there were stones of ore weighing from 50 lbs. to 60 lbs. weight—half solid. At this depth nothing could look better, and there can be now very little doubt of our entering into a great body of ore even quicker than we anticipated. It will be useless for me further to describe this improvement, which I sincerely congratulate the company upon. Everything is going on satisfactorily, and the machinery working regularly and well.

EBURY.—W. Kitto, Jan. 7: In this mine, as in all others in this neighbourhood, during the past month our progress has been much interrupted with the continous rain. The shaft had almost reached the 60 fm. level, but we had to suspend sinking in consequence of the water. We have cut drains and made dams in various places, and at present the water is again going back nicely. However, perhaps we had not better attempt the sinking ere we see the weather somewhat settled. We have eight men driving the 50 end west, and to-day both lode and ground shows evident signs of improvement, and I am in hopes it will lead us on to some ore ground ahead. I have before intimated my anxiety to communicate, if possible, with some old works said to contain good ore ere we cross-cut to the Westminster lode, as we require ventilation badly, and in all probability we might raise ore to good advantage.

EAST CHIVERTON.—R. Southey, Jan. 7: Last Saturday, being our usual setting-day, the following bargains were set:—Bartlett's engine-shaft to sink below the 25 fm. level, at 30l. per fm. The main cross-cut to drive north, by four men, at 38s. per fathom; and to drive east on No. 1 lode, by four men, at 3l. 10s. per fathom. The water in our engine-shaft during the late floods has increased about two strokes per minute, and the ground getting much harder as we near the lode, which is considered in this district a good indication for mineral. We have about 3 fathoms more to sink before we cross-cut to No. 1 lode. Our engine and pitwork continues to work well.

EAST PLYNLIMMON.—John Paull, Jan. 4: The adit level going west from near the River Wye is now in 5 fms., but is still in clay and gravel, the level having, so far, to be timbered. In the loose ground we find stones of gossan from the lode, and as the rock is now just appearing in the bottom of the level we shall, in a little further driving, see the character of the lode at this point, and from whence the ground rises quickly to a height of 40 fms. At a more favourable time of the year, and in dry weather, it will be advisable to make a trial on the lode by sinking near the river, where lead ore is to be seen. In the western part of the sett an open cutting is being taken up for the deep cross-cut north, and the rock will soon now be high enough for the level to enter, when six men should be put here to go forward to the lodes with all dispatch; four are employed at present.

EAST PROVIDENCE.—J. Nancarrow, W. White, Jan. 2: The following was set:—Skip-road to put in the shaft, to divide from the 106 to the 122 fm. level, by twelve men, at 12l. per fathom. The 106 to drive north, on the Carbona, by six men, at 5l. per fathom; lode worth 10l. per fathom. The winze to sink below the 94 by four men, at 5l. per fathom. The 70 to drive east by four men, at 5l. 10s. per fathom; lode improved, now worth 7l. per fathom. The 50 to drive east by two men, at 4l. per fathom; the end is opening up tribute ground. We set ten pitches to 20 men, at an average tribute of 9s. in 1l.

EAST ROSEWARNE.—C. Glasson, Jan. 7: The shaftmen have fixed the 20 fathom drawing lift in the 115 fm. level, and will resume the sinking of King's shaft to-morrow, in a lode 12 in. wide, worth 10l. per fm. In the 115 fm. level, west of shaft, the lode is 18 in. wide, worth 6l. per fm. One stope in the back of this level worth 6l. per fathom. In the 115 fm. level, east of shaft, the lode is 12 in. wide, worth 5l. per fm. Two stopes in the back of this level worth 6l. per fathom each. In the rise in the back of the 105 fathom level, west of shaft, the lode is 12 in. wide, worth 6l. per fathom. In the 105 fm. level, east of shaft, the lode is 12 in. wide, worth 4l. per fathom. One stope in the back of this level is worth 5l. per fathom. In the 95 fm. level, east of shaft, the lode is 12 in. wide, worth 3l. per fm. Two stopes in the back of this level are worth 6l. per fm. each.

EAST NEW WHEAL LOVELL.—C. Bawden, Jan. 6: We have discovered another lode south, which is 4 ft. wide, and producing tin throughout—a very fine lode, and one which cannot fail to produce large quantities of tin on being developed. Sinking will be forthwith commenced, and I hope ere long to report on a good paying lode.

EAST SNAEFELL.—W. H. Rowe, Dec. 31: In the bottom, or 35 fm. level, we are driving both north and southward on what appears to be the regular footwall of the lode. I would have started a cross-cut towards the hanging part of the vein at once, but as both walls are tending towards each other we shall find both portions of the lode together in this direction, and I think we may with advantage reserve the cross-cut for some more desirable point northward. I do not expect to have anything very new to report from this part of our operations for some little time, but the feed of water reported on Tuesday cut in the south forehead, and since then some stones of lead and jack in the open ground are at least promising indications. The 21 south is driven a little over 3 fathoms (two men only work here); the lode consists of soft killas and spar, with a string of lead towards the sole. This driving is so far satisfactory in proving that the ore cannot have dipped northward as fast as it appeared to do above the 15, and to be fully satisfied upon this point by continuing the driving right through to the ore ground is certainly worth the expense. The sump in the 20 fm. level north is sunk 2½ fms.; the lode in the last few feet is "nipped" by a close run of ground, the leading part being only a few inches wide, but well defined, and composed of kindly flookan, &c. In about a month I hope to see a great improvement here.

EAST SNAEFELL.—W. H. Rowe, Jan. 5: The 35 end south looks still more encouraging than when I wrote on Thursday. There are now two branches in the end forming a hanging and lying, from both of which I to-day broke some kindly pieces of spar, mixed with lead and jack. Water is freely flowing from the forebreast and sole.

EAST WHEAL BASSET.—Wm. Nancarrow, Jan. 6: In the 140, south of new shaft, we are still pushing on the cross-cut, but have not yet cut the lode. In the 130, east of new shaft, we are still cross-cutting south towards the south lode. In the 130, west of No. 1 cross-cut, the lode is worth 10l. per fm. for copper ore. The lode in the 130, east from No. 2 cross-cut, is small, and the ground hard, but we expect a change in this end soon, judging from the level above. The stope in the back of the 125, east of rise, is worth 16l. per fm. for copper ore.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 6: In the rise in the back of the 110 we have a good lode, worth 15l. to 20l. per fm. for length of rise (8 ft.) The stope over this level, east of rise, is worth 20l. per fm. In the 90, 85, 75, and 65 fm. levels there is no change since our last report. In the 55 fm. level, which is the farthest advanced end eastwards, we have the finest looking lode seen in this part of the mine; it is now worth 2½ tons of ore per fathom, with every appearance of further improving. In the back of this level the lode is worth 12l. per fathom for length of rise (8 ft.); this rise is 7 fms. in advance of the 45 fm. level end.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 2: The lode in the 55 east, on the caunter, will produce fully 2 tons of copper ore per fathom. All the other places are the same as reported on Thursday.

EAST WHEAL REETH.—T. Uren: We have not yet completed the adit, having had very heavy floods of rain, which has retarded us in such old workings. The men are pushing on as fast as possible to get into the tin ground, when they will have a dry place to work in, and I feel confident will raise a large quantity of tin in the hill before us; and shall not require any steam-power for that purpose.

EAST WHEAL RUSSELL.—Wm. Richards, Jan. 7: The middle lode, driving east of the Tunnel, is 2½ ft. wide, containing quartz, flookan, prian, mundic, and a little black oxide of copper. The north lode, driving east of the Tunnel, is 2 ft. wide, and containing quartz, capel, peach, mundic, and stones of yellow copper ore.

GREAT NORTH DOWNS.—W. Rich, W. Ennor, Jan. 6: Sleggan's engine-shaft is in full course of sinking, on the south side of the lode; the water is coming up very powerfully from the bottom of the shaft, which looks as if there was a large porous lode below. The 84 end west is worth 5l. per fm. The 84 east is unproductive at present. The winze below the 74 west is worth 12l. per fm. The winze sinking under the 74 fm. level east is worth 5l. per fm. The stopes in the 74 west are worth 12l., 9l., and 7l. per fm. The 84 end, west of King's, carries good stones of ore; we have water in the bottom of King's shaft, which prevents our working below the 84 fm. level. The tin lode in the 48 west is worth 10l. per fm. The 75, east of Butler's, is worth 8l. per fm. The stope in the back of this level is worth 8l. per fathom. The stopes in the 64, east of Butler's, are worth 10l., 10l., 8l., and 6l. per fm. The south lode in the 64 east is greatly improved, now worth 12l. per fm. We have set off a cross-cut from Butler's shaft, to intersect this new side lode 10 fms. deeper.

GREAT RETALLACK.—G. R. Odgers, J. Harris, Jan. 2: Setting Report: No. 1 Lode: The engine-shaft to sink below the 30 at the same price as before, they having taken the whole lift at 15l. per fathom; lode 2 ft. wide, with good stones of lead. The 30 to drive south, by four men, at 3l. 3s. per fm.; lode 18 in. wide, with good lead saving work. This level to drive north, by four men, at 3l. 10s. per fm.; lode 18 in. wide, containing good lead, worth 3 cwts. per fm. The stope above this level, to four men, at 36s. per fm.; lode worth for nearly 2 fms. long 8 to 10 cwts. per fathom. The stope above the 20 south, to two men, at 21s. per fm.; lode worth 2 to 3 cwts. per fathom. The 20 to drive north, by four men, at 5l. per fm.; lode 15 in. wide, producing good stones of lead.—No. 2 Lode: The 40 to drive both north and south of No. 2 shaft, by six men, at 50s. per fathom; in the south end the lode is 18 in. wide, of quartz and white iron, with occasional stones of lead, embedded in a prettier killas than we have had for some time. In the north end the lode is 18 in. wide, and worth from 8 to 10 cwts. of lead per fathom; here we have driven 17½ feet this week, and the lode has produced fully 10 cwts. per fathom. The winze to sink below the 30 north, over the present end, by four men, at 45s. per fathom.; lode 2 feet wide, of quartz and white iron; here we may look for a good improvement.—Ground driven, &c., during December, 1868:—No. 1 engine-shaft sunk below the 30 1 fm. 2 ft.; the 30 driven south from No. 1 shaft 4 fms. 5 ft.; the 30 driven north from No. 1 shaft 2 fms. 4 ft.; the 20 driven north from No. 2 lode 3 fms. 2 ft. 10 in.; the 40 driven north from No. 2 shaft 5 fms. 4 ft. 6 in.; the 40 driven south from ditto 4 fms. 2 feet 3 in.; winze sunk below the 30, north from No. 2 shaft, and which is immediately over the present 40 end north, 2 fms. 0 ft. 4 in.—24 fms. 2 ft. 11 inches.

— G. Odgers, J. Harris, Jan. 6: No. 1 Lode: The lode in the engine-shaft sinking below the 30 is 2½ ft. wide, producing good stones of lead. In the 30 north the lode is 18 in. wide, with stones of lead. The stope in the back of the level is worth 10 cwts. of lead per fathom. In the 30 south the lode is 18 inches wide, with good lead, and looking very promising for an improvement. There is no change in the 20 north.—No. 2 Lode: In the 40 fm. level end north, we are glad to say the lode has improved, now worth nearly 15 cwts. of lead per fm.; and in the back of this level there is a lode worth fully 1¼ ton of lead per fm.—a splendid-looking lode. In the 40 south we find good stones of lead, and as the white iron appears to be wearing out we are looking for an improvement shortly. We find lead coming in at the south end of the winze sinking below the 30 north, immediately over the 40 end.

GREAT SOUTH CHIVERTON.—J. Nancarrow, John George, Jan. 6: The 40 west has improved, and now yields 5 cwts. of lead per fathom. We draw a good pile of stuff to-day. The lode in the 50 looks better, and presents just the same appearance as it did in the 40, before we cut the lode there.

GREAT WHEAL BADDERN.—Richard Pryor, H. Tregoning, Jan. 2: Hill Brothers Engine-Shaft: We have nothing new to notice in the 75, west of the cross-cut, on the Baddern tin lode, since last reported on; the ground continue much the same as for some time past, but within the last few days the water has greatly increased. In the 75, on the lead lode, west of the cross-cut, the ground is at present intermixed with branches of spar, blende, and mundic dropping into the lode, which is full 3 feet wide, containing mundic, flookan, spar, and lead; the water at this point is constantly increasing.

GUNNISLAKE (Clitters).—W. Skewis, J. C. Seccombe, Jan. 6: The 36 west is driving by the side of the lode, and when last taken down it yielded good stones of copper ore. In the 36 east we have intersected a cross-course, and are now driving north to intersect the lode east of it. The lode in the 23 west is 2 feet wide, composed of spar, mundic, and iron. The lode in the winze sinking below this level is 18 in. wide, worth 6l. per fm. In the 12 west we are now driving by side of the lode. The stope in bottom of this level, west of No. 1 winze, is worth 8l. per fm. The stope west of No. 2 winze is worth 20l. per fm.

GWYDYR PARK.—W. Smyth, Jan. 5: The lode in the shaft at Gwyn Llifion is without change since last report. The water has rather increased, in consequence of the late heavy rain. The Vucheslas deep adit end is also without change, and still looks very promising, and yields fine stones of lead ore.

HARWOOD.—William Vipond, Jan. 1: The ends driving in Scar Head continue about as usual, and I think I may say the same of the other workings. We have some strength crossing the Trough level this week, bearing in the direction of Richardson's vein, and we have got two or three small samples of ore, which I trust is an indication of a change for the better.

HINGSTON DOWN CONSOLS.—J. Richards, Jan. 7: The sinking of Bailey's engine-shaft below the 140 progresses favourably; the lode is large, 5 ft. wide, and shows improvement, being composed of capel, mundic, peach, quartz, and a little ore of good quality. In the 100, west of Bailey's engine-shaft, nothing has been done during the past week, the men having been engaged clearing the 55 east, on the north part of lode. In the 85, east of Morris's shaft, the lode is 2½ ft. wide, composed chiefly of capel, with a little rich ore. In the 55, east of Morris's shaft, west of the eastern cross-cut, the lode is 4 ft. wide, and continues to be worth 2 tons of ore, or 6l. per fathom. In Chenall's rise, in the back of the 55, east of Morris's shaft, and east of the eastern cross-cut, the lode is 5 ft. wide, and is still worth for length carried (9 ft.) 3 tons of ore, or 15l. per fm. In the adit level south the ground admits of fair progress being made.

IMPERIAL.—E. Pearse, Dec. 23: In the adit cross-cut south we meet with small bunches crossing the level, containing a little lead ore, which shows the ground is mineralised. The stopes in back of the 90, east of shaft, will produce about 7 cwts. of lead ore per fm. The pitch in back of the 10 is yielding a fair quantity of lead, and the men are earning good wages. The lode in the 20, west of cross-course, is poor, and the level is suspended for the present. As soon as the necessary repairs are done to the engine we shall commence sinking the shaft, which will be some time next week.

LOVELL CONSOLS.—Wm. Chappell, Jan. 7: There is nothing new in the 12 west to call for any remark; the lode still maintains its usual size and appearance, similar to that of the lode in the bottom of the adit, which is worth over 20*l.* per fathom. We are progressing satisfactorily with the clearing of the adit east of new shaft, where we hope to make a discovery. Machinery and pitwork in good working order.

MAUDLIN.—John Tregay, Jan. 2: The lode in bottom of the deep adit level is as last reported, worth 1½ to 2 tons of copper ore per fathom; we have not taken down much of this lode since last report, as our attention has been turned more especially to pushing up the rise. The lode in the rise is producing 1 ton of copper ore per fathom.

MINERA UNION.—W. T. Harris, Jan. 7: Low's Shaft: The ground in the 0 yard level cross-cut consists of black limestone and spar. The water still continues to rise in the shaft, so nothing can be done in the 60 yard level.—Boundary Shaft: The ground in the 60 yard level north consists of shale; good progress being made. The pitch in bottom of this level south is worth 16 cwts. of lead per fathom.—Flue Shaft: The pitch in bottom of the 40 yard level north is worth 10 cwts. of lead per fathom. The pitch in back of this level is worth 8 cwts. of lead per fathom.—Brabner's Shaft: The ground in the 80 yard level cross-cut consists of black limestone and shale; very congenial for lead. The pitch in back of this level south is worth 15 cwts. of lead per fathom. The ground in the big cross-cut is favourable for progress.

NEW CLIFFORD.—J. Goldsworthy, Jan. 7: The cross-cut north is being vigorously extended, and the strata is everything a miner could desire; this cross-cut is a work of great interest, and will enable us to judge of the best means of carrying out the necessary operations for developing the splended lode recently cut at this point.

NEW CROW HILL.—T. Trelease, A. Kent, Jan. 5: At the engine-shaft we have commenced sinking, the ground is moderately easy, and we hope to make good progress in sinking. Our pitches are looking rather poor at present.—Wheal Louisa: The shaftmen have been somewhat hindered in the past week from pushing on the 75 fm. level cross-cut by the foundation of the balance-bob failing, which obliged us to stop the engine to repair it; the necessary repairs have been made, the water forked, and the cross-cut is again being pushed on as fast as possible. The lode in the 60 fm. level end east is without change to notice, still about 3 ft. wide, and pretty regular, but without ore to value. The pitch also is without change to notice.

NEW GREAT CONSOLS.—R. Pryor, T. Bennett, R. Trathen, Jan. 4: The water is being drained to the 86 fm. level, the bottom of the mine, and Ellis's engine-shaft men are at present engaged in clearing the stuff from this level, after which we shall be able to examine the lode, &c. The bargains throughout the mine are looking a shade better. Saturday next being our pay and setting, a full and detailed report shall be sent you.

NEW TRELEIGH.—S. Michell, Jan. 6: The lode in the 78 east is still looking very well, worth 2 tons of ore per fathom, and water flowing from the end very strong, which gives us an idea that a large lode is before us, and I have no doubt will be found productive in a short distance. In the same level, west of the shaft, the lode is looking better than when I wrote to you last: I should say it will produce 1 ton of ore per fathom, and opening wider. The stope in back of the eastern level is worth 2½ tons of ore per fathom. The bottoms of the 70 fm. levels, west of shaft, are still under water; we must wait a little longer until the level is driven forth underneath. We have again cut into the lode in the new shaft, and find it further improved, and by the end of the week we shall have 6 feet of lode standing in the bottom of the shaft, when it will be taken down, and I have not the least doubt of finding a tolerably good lode from what I can see to-day. We have been visited with fearful weather in Cornwall, but have managed to keep the mine in fork. I believe our neighbouring mines are badly off.

NEW WESTMINSTER.—Wm. Kitto, Jan. 7: The past month's operations have not been so successful as I could have desired; the continuous floods have very much interfered with us, inasmuch as for several days in succession we have been compelled to abandon the bottom part of the mine. At this stage of things we partially repaired the western engine-shaft, and set that engine in motion, which proved adequate to the requirements, and enabled us to work again in the bottom part of the mine; at present we only work the western engine occasionally, and I see nothing at present to prevent us going on all right in future. Although we have had a most desperate struggle to keep the mine clear, yet when we consider that the late floods have necessitated the suspension of some of our leading mines in the neighbourhood, and at the present moment I believe we are the only ones within some miles of this place we are able to see the bottom of their mines, I think we have reason to congratulate ourselves in being able to so successfully combat with the water. At the 80, or bottom level, we are opening out two very promising ends; lode not rich, probably worth 12 cwts. of ore per fathom. In the 70 fm. level end east I see but little change to notice since my last; lode large, with fine lumps of ore, a kindly end. The 60 fathom level end is becoming harder, and more settled ground; I think we should cross-cut this end shortly, as it is very probable there is yet more lode standing off in the side. I do not know that I have any other change to cause a remark at present; I trust we shall now get a change of weather, which I assure you is very desirous in this part of the country.

NEW WHEAL LOVELL.—C. Bawden, J. Priske, Jan. 6: The only alteration in the tutwork bargains since last report is a great improvement in the bottom of the 40, east of Hill's, where the lode is worth 120*l.* per fathom; a magnificent course of tin. Our next monthly sale of tin will be considerably in excess of any yet sold.

NEW WHEAL TOWAN.—Richard Pryor, Jan. 6: We have met with a slide, which heaved the lode fully 3 ft. south, above which the lode has improved, and will produce fully 1 ton of copper ore per fathom, and I think it will further improve as it gets out of the influence of the slide.

NORTH DOWNS.—F. Pryor, J. Williams, Jan. 5: The 95, east of King's shaft, is presenting, in our opinion, a better appearance. In the 85, west of the same shaft, we are sorry to say, in consequence of the water, that our progress is slow, although we do not consider it a bad indication; our reason for coming to this conclusion is that we are fast approaching the ore ground gone down in the 60 fm. level. We need not mention all points of operation, but the sump-winze, which we advised to be sunk, looks well, worth 25*l.* per fathom, that is for 9 feet. On the whole, we are, in our opinion, looking better than last reported. In Wheal Peever the water has had an effect on our operations; this is, as in all other mines, temporary.

NORTH JANE.—James Rowe Jan. 7: Setting Report: Last Saturday we set Leed's engine-shaft to sink below the 36 by six men, at 17*l.* per fathom; shaft to be carried 13 ft. long; the lode has now got to be 6 ft. wide, not so good for tin, but a good branch of mundic about 18 in. wide, but still a very promising lode for making tin in deeper levels. The 36 to drive east by four men, at 4*l.* 12s. 6d. per fathom; lode 4 ft. wide, producing a little tin. I am happy to say that with all the wet weather we have no difficulty in keeping the water.

NORTH POOL.—J. Vivian and Son, F. Clymo, Jan. 6: Ballarat shaft is now 5 fathoms under the 40; we are making good progress in the sinking, and trust to reach the 50 in a shorter time than we previously stated; and judging from the indications now presented, we are likely to meet with a valuable discovery of copper when that depth is attained. We are trying some points on the middle lode where there is some copper, and hope to be able to report favourably thereon in a few days. We have about 12 tons of copper ore in preparation for our next sale.

NORTH ROSKEAR.—R. Goldsworthy, Jan. 6: Pearce's shaft is now down 10 fms. 2 ft. 9 in. below the 205. Since my last report the south branch has improved in size, but the north branch is not quite so productive; this shaft is worth 15*l.* per fathom, and the price for sinking 32*l.* per fathom. In a winze sinking below the 205, east of Pearce's shaft, the lode contains a little copper, but not sufficient to value; this winze is sinking at 9*l.* per fathom. Doctor's shaft has been sunk 8 fms. 1 ft. below the 230, in which the lode is improving a little in size, but poor. The late managers let this shaft to sink to the 240. The stope in the bottom of the 230 is suspended on account of an increase of water. Two stopes in the back of this level are worth on an average 8*l.* per fathom; price for stoping being 3*l.* 5s. and 3*l.* 5s. 10d. per 100 sacks of tinstuff. A stope in the back of the 216 is worth 9*l.* per fathom; price for stoping 3*l.* 5s. per 100 sacks of tinstuff. In the 140 fm. level cross-cut, south from Wheal Seton, I have set to drive 5 fathoms for 70*l.*, as we want to push this up as fast as possible. In the Wheal Crofty, or eastern part of the mine, I have set a winze to sink in the bottom of the 140 at 5*l.* per fathom, and 3*l.* per 100 sacks of tinstuff. The stope in the bottom of this level is still worth 14*l.* per fathom; price for stoping 5*l.* 5s. per 100 sacks of tinstuff, and 6*l.* per month to assist in paying the expenses of draining the water. Two stopes in the back of the 140, the price for stoping being each 3*l.* 5s. per 100 sacks of tinstuff. A stope in the bottom of the 120, stoping at 3*l.* per 100 sacks of tinstuff; also two other stopes in the back of the same level, each at 3*l.* per 100 sacks, and one stope in the back of the 94, stoping at 3*l.* 5s.; these stopes are worth on an average 8*l.* per fathom. I have suspended the two ends in the 24, and let all the smith work on the mine for two months, at 9*l.* per month. I have also let the spalling of the tinstuff, at 3s. 6d. per 100 sacks. We have commenced this day to repair Doctor's shaft, and prepare it for the wire-rope, which I hope to get to work in a fortnight from this date.

NORTH SHEPHERDS.—E. Blewett, W. Blewett, Jan. 6: During the last day or two we have been engaged fixing iron rods in Rye's shaft, from the adit to the 50 fm. level; this work is now near completion. Rye's shaft is being sunk by nine men, at 14*l.* per fm.; this is now down about 11 fms. below the 50 fm. level, lode still large and promising, having an improved appearance, and occasionally yielding some good lead. In two months we hope to reach the 65 fm. level, at which point we recommend driving east and west on the lode, and in doing so we have confidence mineral will be met with. The new flat-rod shaft has been knocked through to the 20 fathom level, and discharging commenced; four men are now engaged driving the 20 fathom level west, on the south lode, where the lode is promising, and producing a large portion of mundic; we are now confident that the junction before us here will be reached in the stated time. We think highly of this part of the mine.

NORTH TRESKERBY.—R. Pryor, T. Jenkin, Jan. 7: Tresider's shaft: The lode in the 140, driving east, of shaft, is without change to notice. The lode in the 130, driving east, is still opening up tribute ground, which is a little more favourable for progress. During the past week we have met with a horse of killas in the 120 fm. level end, east of shaft, which for the time has lessened the value of the lode; but, judging from present indications, we think it will soon resume its former value, which was worth fully 3 tons of ore per fathom; now worth from 1½ to 2 tons per fathom. It must be borne in mind that this end is not quite so far east as where we met with the ore in the level above. The lode in the winze sinking below this level is not quite so good as when last reported on. We have about 10 ft. more to sink to communicate to the 130 fm. level. The lode in the rise in back of the 120, and 3 fms. behind the end, is worth fully 2 tons of ore per fathom. The lode in the 110, driving east, is worth from 1½ to 2 tons per fathom, and letting out a quantity of water. Since our last report we have resumed the driving of the 100 east, in which we have a lode 3 ft. wide; The appearance and character of the same are good. The lode in Doctor's (new) shaft is 3 ft. wide, composod of fine gossan, and the ground favourable for sinking. All other places without change to notice since last report. The machinery is in good condition, and working well.

OLD GUNNISLAKE.—H. Rickard, Jan. 6: The lode at Parker's shaft, sinking below the 48, or deep adit level, maintains its size and quality, and is letting down water as we progress. The lode in the 48 west is much the same as last week. At both these points a more promising lode cannot be seen. We are making the necessary preparations for the removal of the small boiler at Michael's, and to replace it in the room of the one now at Parker's, which is in a very leaky condition.

PEDN-AN-DREA UNITED.—Wm. Tregay, J. Thomas, Jan. 2: Sump: The water is now down 3½ fms. below the 120, and the engine working well; we shall be enabled to resume driving that level next week. In the 100 east rise there is no change to notice, the lode producing a little tin, but not to value. In the 68 east there is a gradual improvement in the tinstuff, and occasionally good rocks of tin.—Cobbler's: In the 90 north we have cut into the lode 3 ft.; so far as seen it is a good tinny lode, worth for that breadth 15*l.* per fm.; the north wall not yet seen; the end is very hard, and the water is spouting from it in streams to a distance of 12 ft.; we expect a large lode here.—North Mine: The 55 west end is worth quite 25*l.* per fm.; ground hard for driving. The stope in back of the 55 is worth fully 25*l.* per fm. In the 47 cross-cut end we find spots of tin in the capels in the end, and other indications of more of the lode still standing further north. We have set two pitches, one on each side of this cross-cut, on the lode already intersected, at 8s. in 1*l.*, to strip down the lode alongside of the old men's level; this lode is as last reported, worth 25*l.* per fm. The pitches in the upper levels are still looking well, and producing their usual quantities of tin. We sold 3 tons 8 cwts. 1 qr. 13 lbs. of black tin for 218*l.* 5s. 1d. This closes the sales of black tin in December.

PENHALE UNITED.—R. Pryor, H. Bennetts, Jos. Pryor, Jan. 5: Phillips's engine-shaft men are making good progress in cutting ground for the cistern, which will be completed in about 10 days' time, after which we shall fix the plunger-lift in the 90, and all the necessary preparation is being made. The lode in the 90, driving north of this shaft, is looking better, and worth 4 cwts. of lead per fathom, with every indication of a further improvement. The lode in the rise in back of this level is still worth 3 cwts. of lead per fathom. The lode in this level, driving south of shaft, is worth 15 cwts. of lead per fathom. The 80 fm. level winze is communicated to this level (the 90), which has laid open a good piece of ground. Hall's shaft is cleared and secured a little over 9 fathoms below the 80, but the shaft is still full of stuff, and requires timber. The lode in the 80, driving north of this shaft, is still improving, and opening up tribute ground. We have also set two or three tribute pitches in back of the 70, south of the engine-shaft. There is no change to notice in any other part of the mine. Should the weather prove favourable we shall sample again next week.

PENHALE WHEAL VOR.—W. H. Martin, Jan. 6: In the engine-shaft, sinking below the 94, the ground is mixed up with more spar, and the progress, consequently, is not so good; I look upon these changes as indicating that the lodes are also changing. No lode has been taken down in the 94 fm. level west end for the week.—Penhale Lode: The lode in Ritchie's shaft, sinking under the 60, is 1 ft. wide, and of precisely the same character as last reported on, with several small branches of mundic running in the country. In the 60, west of Ritchie's shaft, the lode continues 2 ft. wide, and produces occasionally good stones of tin.

PENHALLS.—S. Bennetts, W. Higgins, Jan. 2: In the 70, both east and west, we have only just commenced to take up the lode desued; so far as seen the former is not so productive, but the latter continues worth 10*l.* per fathom. The 50 east, on the junction of Cowling's and downright lodes, is worth 8*l.* per fathom. The 55 east, on new lode, is worth 7*l.*; and the 45 east, on ditto, 8*l.* per fm. In the 40 west, on Pink lode, a small cross-course has been passed; the main one, however, we think is still ahead.—Piak Mine: The lode in the Shop shaft, below the 30, is 3 ft. wide, and worth 10*l.* to 12*l.* per fm. The 20 west end, from same shaft, is worth 10*l.* per fm. In most of the other points of operation very little lode has been broken during the past week, and consequently no change to notice.

PRINCE OF WALES.—J. Gifford, W. Gifford, Jan. 7: In the 65 east the lode is still large, but disordered by the caunter branch coming in from the south side of the level, but we think it will improve again to the east of it. In the 65 west the lode is 2½ ft. wide, composed principally of capel, with stones of mundic and copper ore, but not to value; this end is suspended for the time, and the men put to rise on the cross-course, about 5 fms. behind the end, for the purpose of ventilation, and opening out ground for stoping. In the 55 east the lode is 1½ ft. wide, principally capel and gossan. The rise in the back of the 55 east, against new shaft, is progressing favourably. No. 1 stope, in back of the 55 east, is worth 20*l.* per fathom. No. 2 stope, in back of the 55 east, is worth 10*l.* per fathom. In the 55 west the lode is 2 ft. wide, composed of capel, quartz, and mundic, with good stones of copper ore—a promising end. Two stopes in back of the 55 west are worth on an average 10*l.* per fathom each. In the 55 east, on new south lode, the lode is 2 ft. wide, composed of capel, quartz, and mundic. In the 45 west, on new south lode, the lode is 1½ ft. wide, worth 8*l.* per fathom. In the 45 fathom level cross-cut south we have cut the new south lode, which is 1½ ft. wide, composed of capel and quartz, with good stones of ore intermixed. In the stope in back of 45 west the lode is worth 10*l.* per fathom.

PRINCESS OF WALES.—T. Foote, G. Rickard, Jan. 6: Our progress, taking the weather into consideration, is satisfactory, and we hope to get the engine to work by the time stated at the last meeting. Everything is being pushed on as fast as possible, so as to get everything in good order.

ROARING WATER.—H. Thomas, Jan. 5: The prospects of this mine never looked as well as at this time, and I think ere long I shall have the pleasure of reporting of a good paying mine.

SNAEFELL.—H. James, Jan. 4: The lode and ground in the shaft is much of the same character as for some time past. We have sunk this month 2 fms., and have now about 6 feet more to sink before we cut lodge and drive out at the 74 fm. level. In the 60 north there is no change to notice since last report. The 40 fm. level end north is producing a little lead and blende occasionally. The lode in the 40 fm. level sump is about 2 ft. wide, producing some lead and blende, but so good as it has been. The 20 fm. level stopes continue to produce some good lead and blende, but more mixed with the country rock than before. We are going on more regularly with the dressing of the ore stuff. The crusher, machinery, and pitwork are all in good order, and work well.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, Jan. 2: We have been again hindered in driving the levels below the 61, by a breakage of the balance-bob and consequent influx of water, but this has again been set right, and the water in course of being drained. In the 61, west of King's shaft, we continue driving in the soft part of the lode, intermixed with granite, leaving the most tinny part to be stripped down by stoping. The three stopes in the back of this level continue to produce satisfactory tinstone throughout a width of about 3 fms., and the western stope is producing richer tinstone than we have before had from this lode. In the 51, west of Vivian's shaft, there is now a good branch of copper ore, 9 in. wide, worth about 7*l.* per fm., and looking likely to improve. In the 51, east of Old Tye shaft, the lode is 2 ft. wide, producing tin and copper throughout; a very promising looking lode. There is no alteration worthy of notice in the other parts of the mine.

SOUTH DARREN.—J. Boundy, Wm. H. Boundy, Jan. 2: In consequence of the heavy rain which we have had the influx of water in the mine has been so great this week as to drive us out of the 70 west, although we are doing our best to get the water under that level if possible, and hope to resume operations again in course of a few days. No other alteration of importance has occurred at this mine during the week.

SOUTH MERLLYN.—H. R. Harvey, Jan. 6: I am pushing on the driving of the 40 south; the lode in the end still continues to look promising, and producing at the present time good stones of lead ore. I think it will take but a small outlay to bring this mine into a dividend-paying state, and I feel confident it will give good profits for years to come.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, Jan. 2: The men are busily engaged cross-cutting both north and south at the 42; we have not yet met with anything more than we stated in the report for the meeting.

ST. JUST AMALGAMATED.—R. Pryor, W. White, R. Wearne, Jan. 6: We set the following bargains on Saturday:—The 62 to drive south of Phillips's engine-shaft, by four men, at 3*l.* 10s. per fm.; lode 2½ ft. wide—a kindly lode; by driving this level a few fathoms further we shall intersect Davey's lode, which was very productive in the shallow levels.—Saveall's Lode: The 110 fm. level to drive east of engine-shaft, by two men, at 5*l.* 10s. per fathom, in a lode worth 5*l.* per fm. The 100 fm. level to drive east of this shaft, by two men, at 3*l.* per fm.; lode worth 4*l.* per fm. This level to drive west of shaft, by two men, at 8*l.* 10s. per fm.; lode worth 5*l.* per fm. The 90 to drive west of shaft, by four men, at 7*l.* 5s. per fm.; lode worth 6*l.* per fm.; in driving this level 13 to 14 fms. further it will come under a good run of tin met with in the level above, which was made at and about the intersection of this and a lode seen in the 62 cross-cut, below which no trial has been made. We have set a cross-cut in the 74 fm. level, about 16 fms. east of the junction, to prove this lode.—Pryor's Lode: The 62 fm. level to drive west on this lode, by two men, at 3*l.* per fm.; lode worth 4*l.* per fm. A winze to sink below this level, by four men, at 3*l.* per fm., and 6s. 8d. in 1*l.* for tin; lode worth 8*l.* per fm.; this lode is improving in depth in its appearance, character, and value, and should it continue we shall have to cross-cut it from the north lode shaft, or clear up the old shaft, which is sunk to the 40 on this lode.—Owl Lode: The 40 to drive north of Reddipper shaft, by two men, at 2*l.* 15s. per fm.; lode worth 4*l.* per fm. The 20 to drive north of shaft, by two men, at 7*l.* 15s. per fm.; lode worth 6*l.* per fm. The 10 to drive north of shaft, by two men, at 6*l.* 10s. per fm.; lode worth 4*l.* per fm. The 10 to drive north of Reddipper shaft, on branch, by two men, at 3*l.* 15s. per fm.; lode worth 8*l.* per fm.; this end is being driven on a new branch, which has not been seen before; it is all in whole ground, and we regard it as an important feature. The winze to sink below the adit level, on branch, by two men, at 5*l.* 10s. per fathom; lode worth 4*l.* per fm. The 20 to drive east of Reddipper shaft, by two men, at 3*l.* 10s. per fm.; lode worth 5*l.* per fm. We also set 43 pitches to 120 men, at tributes varying from 5s. to 15s. in 1*l.* Our pay and setting went off very satisfactorily.

TAMAR VALLEY.—J. Goldsworthy, Jan. 7: The fixing of the plunger-lift at the 47 is nearly completed; all being well, we shall be in fork to the bottom by Saturday next. The clearing of the various levels is being pushed on, and good progress is being made. The cross-cut to the new lode will be commenced almost immediately; we have commenced raising lead and fluor-spar. I believe all I have previously stated in connection with this property will be realised.

VIGRA AND CLOGAU.—W. J. Cooke, Jan. 7: At the St. David's lode, No. 2 mine, no water has been drawn up No. 6 shaft since Friday last; the communication was effected on Saturday. The line of rails is extended to the junction, which will facilitate the transport of ore through the mine. A little visible gold has been obtained during the past week, broken near the junction. The lode in the eastern drive, from No. 6, is 3 ft. wide, has improved, and looks kindly for gold. All other operations are progressing as usual.

WEST CARADON.—W. Johns, N. Richards, Jan. 5: The south part of Allen's lode, in the 170 east, is without alteration since last reported—about 1½ foot wide, containing stones of ore. We are still pushing on the 170 fm. level cross-cut north, in which the ground is moderately easy for progress, but during the past month we have not met with any lode or branch. We have holed the 104 east, on Dunstan's lode, to the 114, driving west at the bottom of the winze (Gonamena), and as soon as the stuff is cleared we shall commence stoping both east and west of the winze. In the 17, on the north part of Gilpin's lode, we have still a regular leader of copper ore in the end. At Marina's, in the 30, east of the cross-cut, the lode is 2 feet wide, producing saving work—a very kindly lode. We have completed the cutting of the plat in the 30 (Marina's), and resumed the sinking of the shaft at 15*l.* per fathom, and when down 6 feet we shall have to fix a drawing-lift. The heavy falls of rain of late has caused an increase of water, but we are keeping it easily.

WEST GODOLPHIN.—J. Vivian and Son, J. Pope, Jun., Jan. 6: The following is an account of our setting, which took place on Friday last:—Pressure shaft, to sink below the deep adit level, on the caunter lode, by six men and three boys, at 7*l.* per fathom. The deep adit level to drive south-east of Pressure shaft, on the caunter lode, by two men, at 2*l.* 10s. per fathom. The middle adit level to drive east of the caunter, on south Hope lode, by two men and one boy, at 30s. per fathom. Three tribute pitches to six men, at 10s. 6d. in 1*l.*; and four to eight men, at 13s. 4d. in 1*l.* The tin sale on Friday last realised 206*l.* 14s. 3d. This falling off is only temporary, and is owing entirely to the continuous deluge of rain which we had for more than a month, filling the richest part of the mine with water. I am fully convinced that we shall make much larger sales and profits in the present year than we have ever yet done, and that shares will command a high price ere long.—Particulars of Tin Sale, Jan. 1: 3 tons 4 cwts. 2 qrs. 11 lbs., at 64*l.* per ton=206*l.* 14s. 3d.

— Jan. 7: In Pressure shaft, sinking below the deep adit level, the lode is now worth 8*l.* per fm. In the middle adit level, east of the caunter, on South Hope lode, the lode is 2½ ft. wide, looking well, and worth fully 8*l.* per fm.

WEST PRINCE OF WALES.—W. C. Cock, Jan. 5: We continue to make fair progress in sinking in both shafts. In the south shaft the lode has been a little larger during the past week, containing more capel, with a little mundic and spots of yellow copper ore. In the north shaft we are not carrying the lode, it being a little behind the shaft, in consequence of having taken a more perpendicular direction, in this we are fortunate, as if it were cut into it would most likely cause an increase of water in the bottom of the shaft, and impede our progress in sinking.

WEST WHEAL TREMAYNE.—S. Roberts, Jan. 5: The ground at the engine-shaft is rather hard at present; the main part of the lode, which is in two branches, each 6 in. wide, on the north side of the shaft, will produce 1 ton of ore per fathom, and in the whole width of the shaft there are several smaller branches of ore, so that the whole shaft produces saving work. In the 32 west the lode is 12 in. wide, yielding spar, with stones of copper ore. The winze sinking below the 20 is down 3 fathoms nearly; lode 12 in. wide, composed of sulphuric mundic and copper ore. The 20 west, on south lode, is improving much; lode 10 in. wide, yielding rich ore—a very kindly lode.

WHEAL BULLER.—James Inch, James Brown, Jan. 6: Hocking's Shaft: The lode in the 92, east end, is 3 ft. wide, worth for tin 10*l.* per fathom; we are getting on with the cutting of the plat in this level with all possible speed. The 80 west, on Stevens's lode, is producing tin, but not to value. The stope east of the cross-course, under the 70, on the north lode, is worth for tin 8*l.* per fm. The 70, driving east on this lode, is producing good stones of tin. The stope in back of this level is worth 10*l.* per fathom. The stope under this level, west of the cross-course, is worth 12*l.* per fathom. The stope under the 60, west of Knuckey's winze, is worth 8*l.* per fathom. The stope east of this winze is worth 12*l.* per fathom. A stope west of Bartle's winze is worth 9*l.* per fathom.—Stevens's Shaft: The ground in the 92, east end, is softer for driving; the lode in this end is producing tin, but not to value. The stope in bottom of the 80, west of this shaft, is worth 5*l.* per fathom. The 60, driving east on the north branch, is producing 1½ ton of copper ore per fathom. No other change in the mine to notice.

WHEAL COURTENAY.—J. Gifford, Jan. 6: In the deep adit west the lode is very large, 3 ft. of the south part which we are carrying being composed of capel and peach, with arsenical mundic, and occasional stones of copper ore intermixed. We have began dressing the tributers' ore, and hope to have about 30 tons to sample at the end of February.

WHEAL CREBOR.—J. Gifford, Jan. 6: In the 120, both east and west, we are driving by the side of the lode, which we intend to cut into in the latter part of the week. There is no change in the 96 fm. level cross-cut to notice, and the same remark will suffice for the tribute pitches. We are getting on well with dressing, and hope to sample about 60 tons of copper at the end of this month.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Jan. 2: All the places in the mine are looking precisely the same as we stated in our report for the meeting on Thursday with the exception of the ground in the 90 cross-cut north, which looks very much as if we are nearing the lode, the ground being precisely the same as we may expect before reaching the lode.

WHEAL KITTY (St. Agnes).—W. Polkinghorne, S. Davey, Jan. 2: In the 82, driving west of Holgate's shaft, the lode is large, and worth for tin 12*l.* per fm.—New Shaft, Pryor's Lode: In this shaft sinking below the 94 nothing new has taken place to make any remark on. In the 94, driving west of shaft, the lode is worth for tin 20*l.* per fm. In the 94, driving east of shaft, the lode is worth for tin 14*l.* per fm. In the 82, driving west of shaft, the lode is 2 ft. wide, and worth for tin 13*l.* per fm. In the 82, east of shaft, we are still driving south in order to meet with the lode. The lode in the rise in back of the 82, west of shaft, is worth for tin 13*l.* per fm. In the 65, driving west of shaft, the lode is producing stones of tin.—Caunter Lode: The stopes in the back of the 82 are worth for tin 12*l.* per fm. In the 44, driving east of cross-cut, north of Pryor's, the branch is yielding good stones of tin.

WHEAL MARY ANN.—P. Clymo, J. Harris, J. Stevens, J. Skeat, Jan. 7: Clymo's shaftmen are still engaged in cutting a trip-plat in the 240 fm. level. There is no change to notice in the 230 north since last reported on. In the same level south the lode is 1½ ft. wide, worth 6*l.* per fm. There is no change to notice in the 220 north. In the same level south the lode is 3 ft. wide, worth 20*l.* per fm. In the 210 north the lode is 1 ft. wide, producing stones of ore; and in the same level south the lode is 1 ft. wide, producing stones of ore. In the 200 north the lode is 1½ ft. wide, worth 4*l.* per fm. In the same level south it is 2 ft. wide, worth 5*l.* per fm. In the 190 north the lode is 2 ft. wide, worth 4*l.* per fm. In the 180 north the lode is 2½ ft. wide, producing good stones of ore. The stopes and pitches are producing much as usual.

WYE.—J. Paull, Jan. 4: Murchison's shaft is still going down in speedy ground; present depth, 10 fms., and nine men are now employed to push forward the sinking as fast as possible. In the adit level, driving west, the part of the lode being carried in the drivage is of a very promising character, composed of dark clay-slate, quartz, carbonate of lime, and spotted with lead ore; as this level advances westward, and a greater depth from surface is attained, we may fairly expect good bunches of lead ore to be met with. All the surface work is going on as fast as this time of year will permit. The weather has for some time past been very wet, and much against surface operations. We shall commence building the pit for the 40-ft. water-wheel next week.

FOREIGN MINES

ST. JOHN DEL REY.—The directors have received per Oneida the following report, dated Morro Velho, Nov. 28:—Morro Velho produce, second division of November, 11 days, 3139 oits.; yield, 1·610 oits. per ton. Gaia produce, second division of November, 11 days, 513 oits.; yield, 1·780 oits. per ton. Remittance received, 20,939 oits.—201 lb. troy.

DON PEDRO.—Mr. F. S. Symons reports—Produce cleaned to date (Dec. 1), 14,339 oitavas; estimate for November, 15,000 oitavas; remittance, 39,129 oits. No box work has been taken out since my last, and the general body of lode has not been as auriferous, which will account for the falling off in the produce. Fluctuations must, however, be expected. The lode maintains its size and favourable appearance, and rich deposits as heretofore may be encountered from one day to another. In the explorations, though vigorously prosecuted, no gold has yet been discovered. At Tambor the features are, if anything, more favourable, and the captains are sanguine every time they take samples from this most interesting locality that some will show gold, but have as yet been disappointed.

ANGLO-BRAZILIAN.—Produce cleaned to 20th, 2473 oits., 252 oits. more than for the same period in September. Remittance, 7515 oits. I have the pleasure of advising that since my last the attendance of force on the mine has materially improved, and the operations have proceeded more satisfactorily in consequence. The features of the lodes at the various sections have presented little or no change since last reported on. Northward of Dawson's shaft the workings have been extended to Dawson's canoa, and the lode formed a junction; it yields well, indeed is the most auriferous part of the mine, and being the deepest is most promising for the future. In line of shaft the lode is small, and intermixed with killas.

ROSSA GRANDE.—Mr. E. Hilcke reports—Remittance, 1938 oits. The operations are going on well. The lode in the main level continues small, that in the stopes above same, and in the top level is improving, and likewise the lode in the western level is of a more encouraging appearance. Although the lode in the shaft is not so large as it was when first intersected, it still maintains its solid appearance. About 100 fms., west from the adit, high up on the mountain, we discovered the same lode we are working upon in the mine; its outcrop here is only a few fathoms below the top of the mountain, and its size from 8 to 9 ft. The little explorations made here as yet are leading to the expectations that we shall meet with very large quantities of lode. The favourable situation of this lode will enable us to extract and convey the ore to the stamps with very little expense and considerable speed. I am not yet able to form an estimate of its auriferous quality, for it is only a few days since the Albert stamps commenced crushing this stone. The skins which I have seen washed since vary a good deal. Some of them are very good, and others again poor.

TAQUARIL.—Extract from a letter from Dr. Birt, dated Nov. 28:—Respecting our proceedings at Taquaril I have nothing new to remark beyond all our works are proceeding satisfactorily. The shallow shaft is now terminated and explorations are being made, and some excellent samplings are being daily produced. Had we stamping-mills we could show good results. I saw several washings this week, and one in particular when Pengilly, Mr. Rouse, Colonel Ricardo Vaz, self, and others being present, a small quantity was washed in a batea, and it was calculated this would give 20 oits. to a ton of stuff, or 2½ ozs. I have no more to say than every day I feel more certain that we have a very bright prospect before us in the Taquaril Mine.

SAO VICENTE.—The following has been received from the company's superintendent in Brazil, dated Dec. 1: On the 24th I forwarded, per Don Pedro troop, to Messrs. John Moore and Co., for transmission to you, a box containing 992 oits., or 114 ozs. 9 dwts. 5 grs. (troy) of gold dust. We still have some sand, stamped since the 24th, to clean up. There is no change in the size of the lode at the No. 2 level west since my last; the appearance of the stone seems, however, to be improving. The lode in the No. 1 level west is gradually improving as we extend upon it; it is now about 6 ft. wide.—Jacotinga Formation; According to your instructions, as well as those from Capt. Treloar, I removed on the 24th such hands as would go to the works here, but owing to the place being so far from anywhere where they can purchase provisions, they are very discontented, and many have left. I therefore think it advisable for us to supply them with food at so much per head, at least for the time, or until Capt. Treloar arrives, when I will consult him on the best plan for the future. I am glad to say the recruiting for soldiers is suspended from to-day to the end of February, and I hope now the attendance of our force will be more regular. The canoa is now sufficiently advanced towards completion to allow us to commence passing and proving the jacotinga lines.—No. 1 Cross-Cut: The winze has been sunk 4 fms. 1 foot, and I believe we have intersected or cut through the formation. I say "I believe," because the sides near the bottom having fallen in we could not say for certain. The lines we intersected in the winze showed no gold in the batea. If our force come in regularly I purpose to extend upon and prove the line which showed signs of gold in the cross-cut.—No. 2 Cross-Cut: Here we have extended 8 fms. 1 ft., and though the formation is of a very promising character I cannot report any further discovery of gold as yet. We have just commenced to extend on the line which showed gold in the batea as reported in mine of October 15. Produce of gold for the month from the refuse quartz stamped 526 oits. from 200 tons; yield, 2·6 oits. per ton.

PESTARENA UNITED GOLD.—The following telegram has been received from the agents, dated Pallauza, Italy, Jan. 4:—Remittance of gold made to office, 555 ounces, produce of 25 days' working.

NEVADA LAND AND MINING.—Advices have been received from the manager up to Dec. 6. The repairs of the canal were proceeding, and would be finished by the end of December. Arrangements had been made with parties living below the mill to construct and maintain the tail-race, in consideration of the company allowing them water for irrigation of their lands, so that the tail-race would not cost the company more than $500. The tail-race would be completed by January 15, and the manager calculated on getting the mill to work shortly afterwards. A proposition had been made by the inhabitants of Reno, to the manager, to lay down pipes for supplying the town with water, which would be taken into consideration as soon as the company's funds would allow.

LUSITANIAN.—Palhal Mine: The lode at Taylor's engine-shaft, below the 120, is worth 2 tons per fathom. The lode in the winze below the 110, east of Taylor's, on Basto's lode, is 4 ft. wide, and worth 1½ ton per fathom. In the 120, east of Taylor's engine-shaft, on Basto's lode, the lode is 4 ft. wide, and worth 2 tons per fathom. The 120 west is worth 2 tons per fm. The 110 east is worth ½ ton per fathom. The 110 west is 1 ft. wide, composed of quartz and stones of ore. In the 90, east of River shaft, the lode is 1 ft. wide, composed

of flookan. In the 70, east of River shaft, the lode is 1¼ ft. wide, and composed of flookan and quartz. The lode in the 38, west of Perez's shaft, is 6 in. wide, composed of quartz and flookan. The lode in the 8 fathom level, west of Perez' branch, is 8 in. wide, and worth ¾ ton per fathom. The lode in the 8 fathom level, east of No. 75 winze, west of Perez' shaft, is composed of flookan. The lode in the adit level, west of Perez' shaft, is small and unproductive. The lode in the 28, east of the Slide, on Ponte lode, is 8 in. wide, composed of quartz, impregnated with mundic. In the 60 fm. level cross-cut, north of River shaft, the ground is hard gneiss. In the 60, south of Oak engine-shaft, the ground is hard gneiss. In the 18, south of Basto's lode, west of Perez' shaft, the ground is a hard gneiss, mixed with spar.—Carvalhal Mine: In the great lode we have been sinking the Incline shaft below the 40, but nothing to value. Working on the 40, east of Incline shaft, the lode has not been taken down for the last fortnight. The lode in the 30, east of Incline shaft, is 1½ ft. wide, composed of quartz, and spotted with lead. The lode in the 20 east is 6 ft. wide, composed of quartz. The lode has nos been taken down since last report in the 10, east of Incline shaft. At the deep adit level, west of the River Caima, the lode is 6 ft. wide, composed of quartz. At the top adit level, west of the River Caima, the lode is 3 ft. wide, composed of iron, quartz, and stones of mundic.

RHENISH CONSOLS.—Geo. Sweet, Dec. 31: Christiana: The end driving east in the 20 lachter level will afford 15 centners of lead ore per lachter. A stope in the roof of this level, and 8 lachters back from the above end, will afford 2 tons of lead ore per lachter. A stope to the west of Pittar's winze, and in the roof of the 20 lachter level, will afford 1 ton of lead ore per lachter. A stope in the roof of this level, and near the extreme western breast, will afford 1½ ton of lead ore per lachter. From the appearance of the western end of this stope we think it advisable to extend the end further west, as the shoot of ore seems to be making in that direction. A stope to the west of Sweet's winze, and in the roof of the 10 lachter level, will afford 1¼ ton of lead ore per lachter. A stope in the roof of the adit level will afford 1 ton of lead ore per lachter. Fair progress is being made in sinking the engine-shaft.—Bliebach: The end driving west on the middle lode, in the 10 lachter level, will afford 25 centners of lead ore per lachter. The cross-cut driving south from the north level, 20 lachters west of the above end, has passed through a small branch, composed principally of quartz, with spots of lead ore. A rise in the roof of the 10 lachter level, east of cross-cut, on north lode, will afford 8 centners of lead ore per lachter. A stope on the middle lode, in the roof of the 10 lachter level, and west of cross-cut, will afford 25 centners of lead ore per lachter. A stope in the roof of the adit level, on the middle lode, will afford 1 ton of lead ore per lachter. The different tribute bargains are affording their usual quantity of ores. Nothing has been done in the bottom level for several days past, in consequence of a breakage to one of the pistons of the engine, and as the machine has not been overhauled for some time past we have taken out the tube, to clean the boiler and otherwise put the engine in a good condition. It is now nearly completed, and I hope will be set to work again this evening. Estimated returns for December:—Bliebach and Christiana: Lead ores, 560 centners, 1580 ths.; blende, 120 centners, 120 ths.=1700 ths.—Total cost on mines, exclusive of block, 1650 ths.: leaving 50 ths. Sinking Astley's shaft, 350 ths.; sundries, 60 ths.=410 ths. The breakage and stoppage of Bliebach engine has greatly effected our returns for the month of December.

IMPERIAL SILVER QUARRIES.—Lewis Chalmers, Monitor, Dec. 7: 12 feet of tunnel were completed last week. I have resolved to run the tunnel as an experiment, by two shifts in place of three, having engaged the men to work ten hours in place of eight, as formerly. I thus lose only four hours in the 24; and as the rock seems to be improving, I do not anticipate much loss in point of time, certainly nothing to compensate for the additional cost—over $200 per month.

CAPE COPPER.—The directors have received despatches per bi-monthly steamer Saxon. No mining or other subjects of importance are reported upon. Bills of lading are received for shipment from Cape Town and Algoa Bay, ex coasters, amounting together to 249 tons.

We understand that in a few days the prospectus of a company, for the purchase and working of the celebrated NORTH STAR GOLD MINE, in Grass Valley, California, will be placed before the public. Mr. George Coulter, one of the present proprietors, who represents this valuable property, is a near relative of Messrs. MacCalmont, of the old-established firm of MacCalmont Brothers, of Philpot-lane, so well known in connection with the American trade. He is introduced by them, and supported by their powerful influence, and will retain his entire interest in the new company, as well as have a seat at the board of directors, all of whom are of the highest respectability. As the last advices from the mine show a produce exceeding in value 8000*l.* per month, immediate and profitable returns are expected as soon as the mine is handed over to the company, the *bona fide* nature of which is evident from the purchase-money not being required to be paid until the property has been legally transferred, and the correctness of the statements as to the value of the mine fully confirmed.

GOLD MINING IN BRAZIL.—The advices received by the last mail are of an encouraging character. The returns for November from the Don Pedro Mine was 15,000 oits., and the produce cleaned to December 1 was 14,389 oits. The Taquaril dispatches are regarded as highly satisfactory. In addition to the facts which appear in another column, it is understood that hundreds of tons of stuff have been drawn to the surface from the bottom of the little shaft, samples of which, taken indiscriminately from the heap, show good stamping-stuff. Independently of this, samples have been taken from the vein, which, it is calculated, will yield about 20 oits. (2½ ozs.) of gold per ton—this is only about 11 fathoms from surface. It is expected that at the eastern workings another vein will be met with.

NEW CHIVERTON CONSOLS.—As will be seen by the details of the general meeting, reported in another column, the development of this mine is progressing satisfactorily, and the course adopted by the shareholders show that they are determined to prove its resources with commendable vigour.

CWM DARREN.—We are informed that the discovery made at this mine on New Year's Day has very much improved, holding out the greatest encouragement. A most excellent course of silver-lead ore has been opened upon. The main or leading branch is in the centre of the lode, which is 9 feet wide, all of which is being carried, the leader being from 9 to 12 inches wide, one-half of which is solid ore, besides branches from 1 inch downward throughout the vein. The ore is worth from 18*l.* to 20*l.* per fathom. The right bearing of the lode has now been ascertained, and it is fully expected that it will prove equal to the best mines in the district. Every day will throw a great light on its development, which will be watched with great interest. There are only 300 shares in the company.

The GREAT WESTERN MINING COMPANY has closed its application list, and it is satisfactory to find that the number of shares applied for have exceeded the number to be allotted.

FAHLERZ.—Although the silver mines of Sweden are to a great extent dependent upon the produce of the fahlerz, the miners of this country seldom attach full importance to its argentiferous character, so that whatever advantage the purchasers of the ore may secure from the silver it contains, the miner derives but little. The fahlerz of Sweden has been thoroughly studied by Dr. T. L. Phipson, F.C.S., and he has recently been collecting some valuable information with regard to the fahlez discoveries in the Isle of Man. Although the branch of chemistry in which Dr. Phipson is more generally recognised as an authority is the analysis of ironstones and manures, it would be very useful were those connected with British mines producing silver ores, not at present very marketable, to publish through the Journal the reports and analyses which he is understood to have made.

MINERAL WEALTH OF SOUTH AUSTRALIA.—The produce of the mines of South Australia exported during the past 10 years has reached in the aggregate the sum of 5,659,428*l.* Of the total value of minerals exported in 1867 fine copper accounts for 627,384*l.*; copper ore, 113,409*l.*; lead, 5464*l.*; and lead ore, 3353*l.*

GEOLOGICAL SOCIETY OF LONDON.—Dec. 23: Prof. T. H. Huxley, LL.D., F.R.S. (President), in the chair. The Rev. J. F. Blake, M.A., Gonville and Caius College, Cambridge; Thomas Sparke Parry, Castlebar, Ealing, Middlesex; and William H. Penning, of the Geological Survey of England, Jermyn-street, W., were elected Fellows. The following communications were read:—1.—"On the so-called 'Eozoonal' Rock," by Prof. W. King and Dr. T. H. Rowney: communicated by Sir R. I. Murchison, Bart., K.C.B., F.R.S., V.P.G.S. 2.—"Notes on the Geology of China, with more especial reference to the provinces of the Lower Yungtsi," by Thomas W. Kingsmill: communicated by the President.

On Wednesday, the following papers will be read:—1. "On the *Hyperodapedon* of Elgin, Devon, and Central India," by Prof. Huxley, LL.D., F.R.S., Pres. G.S.—2. "On the Locality of a new Specimen of *Hyperodapedon* on the South Coast of Devon," by W. Whitaker, F.G.S.—3. "Notes on Graptolites and allied Fossils," by W. H. Baily.—4. "On Plant-remains found associated with the Basalt in the North of Ireland," by W. H. Baily.

SIGNS OF PROSPERITY.—A good evidence of the manufacturing prosperity of the town, has been given during the week by the arrival of two huge boilers for two of our local firms, from the Lily Bank Boiler Works, Glasgow, the property of one of our former townsmen, Mr. Wm. Wilson. Mr. Wilson has, we believe, built a great number of the large boilers employed in town, all of which have given the greatest possible satisfaction. The two that arrived this week were of colossal proportions, that of Wednesday being for the firm of J. Clark and Co., Well-street, and that of Thursday, for Messrs. J. and P. Coats.—*Paisley and Renfrewshire Gazette.*

*** With last week's Journal a SUPPLEMENTAL SHEET was given, which contained—Annual Review of the Metal Trade—The Scotch Pig-Iron Trade for 1868—Royal School of Mines: Report of Prof. Warington Smyth's Lectures—Railway Facts—Foreign Mining and Metallurgy—Australian and Foreign Mine Reports, &c.

*** We shall give a SUPPLEMENTAL SHEET with next week's Journal, when several of Prof. Smyth's Lectures at the Royal School of Mines will be published; also the Copper Trade Statistics; some Letters, and other matters.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, JAN. 8, 1869.

COPPER.	£ s. d.	£ s. d.
Best selected..p. ton	82 0 0-	84 0 0
Tough cake and tile	80 0 0-	82 0 0
Sheathing & sheets.	83 0 0-	84 0 0
Bolts	83 0 0-	—
Bottoms	85 0 0-	88 0 0
Old (Exchange)	69 0 0-	70 0 0
Burra Burra	85 0 0-	—
Wire.....per lb.	0 1 0 -	0 1 0½
Tubes	0 0 11½-	1 0

BRASS.	Per lb.
Sheets .....per lb.	9d.- —
Wire ..... „	8¼d.-8¼d.
Tubes ..... „	10½d.-11½d.
Yellow Metal Sheath.p. lb.	7¼d.- —
Sheets ..... „	d.- —

SPELTER.	Per ton.
Foreign on the spot	£20 10 0- —
„ to arrive..	20 10 0- 20 12 6

ZINC.	
In sheets	£25 10 0- 26 0 0

TIN.	
English blocks	112 0 0
Do., bars (in barrels)	113 0 0
Do., refined.....	116 0 0
Banca	110 0 0
Straits	£110 0 0-110 10 0

TIN-PLATES.*	Per box.
IC Charcoal, 1st qua.	1 6 0- 1 8 0
IX Ditto, 1st quality	1 12 0- 1 14 0
IC Ditto, 2d quality..	1 5 0- 1 6 0
IX Ditto, 2d quality..	1 11 0- 1 12 0
IC Coke.....	1 3 0- 1 4 0
IX Ditto	1 9 0- 1 10 0
Canada plates, p. ton..	13 10 0- —
Ditto, at works	12 10 0- —

* At the works, 1s. tols. 6d. per box less.

IRON.	Per ton.
Bars Welsh, in London	6 12 6- 6 15 0
Ditto, to arrive	6 10 0- 6 12 6
Nail rods	7 0 0- 7 2 6
„ Staffd. in London	7 12 6- 8 10 0
Bars ditto	7 10 0- 9 10 0
Hoops ditto	8 2 6- 9 15 0
Sheets, single.....	9 2 6-11 0 0
Pig No. 1, in Wales ..	3 15 0- 4 5 0
Refined metal, ditto..	4 0 0- 5 0 0
Bars, common ditto..	6 0 0- —
Do. merch. Tyne or Tees	6 10 0- —
Do., railway, in Wales	6 0 0- —
Do., Swed. in London.	10 0 0-10 5 0
To arrive	10 5 0- —
Pig, No. 1, in Clyde..	2 14 0- 2 19 0
Do. f.o.b. Tyne or Tees	2 9 6- —
Do. Nos. 3, 4, f.o.b. do.	2 6 6- 2 7 0
Railway chairs	5 10 0- 5 15 0
„ spikes	11 0 0-12 0 0
Indian Charcoal Pigs, in London, p. ton..	7 0 0- 7 10 0

STEEL.	Per ton.
Swed., in kegs (rolled)..	— —
„ (hammered)..15	5 0-15 10 0
Ditto, in faggots 16	0 0- —
English, spring 17	0 0-23 0 0
QUICKSILVER (p. bottle)	6 17 0- —

LEAD.	Per ton.
English Pig, com.....19	0 0- —
Ditto, LB.....19	5 0-19 7 6
Ditto, WB 21	0 0- —
Ditto, sheet.....20	0 0- —
Ditto, red lead 21	0 0- —
Ditto, white 27	0 0-30 0 0
Ditto, patent shot....22	0 0-22 10 6
Spanish.....18	5 0-18 7 0

REMARKS.—In addition to the late 'Change at half-past three o'clock there is an earlier gathering of the most important firms at a quarter to one o'clock at the Lombard Exchange and News Room. Considering so short a time—only a week—has elapsed since the proposed change of place of meeting it has met with wonderful success. With scarcely an exception, there are the whole of the metal brokers, all the copper smelters, tin smelters, yellow metal and spelter houses, the chief of the iron and lead firms, tin-plate agents, and many general merchants. The Metal 'Change may, therefore, now be said to be permanently established at the "Lombard," and in future none but outsiders will attend the "Royal." It is expected that most of the shipbrokers will also join the "Lombard," in which case the 'Change at the "Royal" will very soon become a thing of the past, and merchants will then wonder how they could have borne with such an unpropitious place of meeting so long. There has already been a large amount of business transacted at the "Lombard," and, doubtless, to the loss of such firms who still absent themselves. The year has opened under very favourable auspices for the metal trade, as well as for commercial operations generally, and should nothing unforeseen arise to retard the progress of trade, which it is earnestly to be hoped will not be the case, there is little doubt that we shall enjoy a year of much prosperity. The demand for metals is now becoming active, and prices are, consequently, very firm, with every prospect of further advancement.

COPPER.—A continued improvement has characterised the market for this metal during the week. Advices have been received from Chili to Dec. 2, stating that the charters for the last half of November were equal to 900 tons of pure copper, only 90 tons being bars; the consequence of this has been to cause considerable animation in the market, and an advance in price. Sales have been already made at improved rates, the smelters now asking higher prices for tough ingot. Chili bars have been sold at 73*l.* 10s. to 74*l.* cash, and 75*l.* for arrival, and sales of both Burra and Wallaroo have been effected at 85*l.* cash.

IRON.—In Staffordshire the decision of the Quarterly Meeting to make no change in the list prices will have no effect upon the trade, as it was generally anticipated. At present there is rather a want of orders, but it is expected that the demand will improve ere long. As the ports in the Baltic will be closed for some time, orders from Northern Europe will be small for the next six weeks. In Welsh the quietude which has prevailed in the trade during the last three or four weeks has induced ironmasters to make no change in list quotations; and, consequently, prices will remain the same as during the last quarter. From the American markets the latest advices point to large requirements in the Spring, provided no unforeseen interruption to trade takes place. Orders from the Continent show some improvement in the demand. Home business is quiet, but there is a prospect that early in the year the contracts given out will be larger than they are at present. In Swedish iron there is not much now doing. In Scotch pig-iron the market has not been very active during the week, but prices have rather advanced, the last price received from Glasgow being 55s. cash.

LEAD.—A fair business continues to be done, and the market remains very steady, and prices are firm at the quotations.

TIN.—On Friday an advance of 2*l.* per ton was announced by the smelters of English, making present prices 112*l.* for blocks, 113*l.* for bars, and 116*l.* for refined. The market for foreign has also improved still further, and prices are about 2*l.* per ton higher than they were. Considerable business was done in Straits at 109*l.* to 109*l.* 10s. cash, but the price has now gone up to 110*l.* to 110*l.* 10s. cash, at which sales have been effected; Banca has also advanced to 110*l.* cash. In Holland the stock of Banca in warrants on Dec. 31 was 96,073 slabs, against 151,109 slabs same time last year, and the arrivals towards next sale were 45,941 slabs, against 35,568 slabs same time last year. The stock of foreign in London on Dec. 31 was 1665 tons, against 2256 tons the previous year.

SPELTER has continued rather inanimate, and no transactions of importance have occurred. The price for parcels on the spot remains without alteration. The stock in London on Dec. 31 was 1659 tons, being a decrease of only 4 tons during the month.

TIN-PLATES.—The works are in pretty regular employ, and prices, especially for cokes, are very firm.

STEEL.—The demand for foreign is rather more active.

QUICKSILVER.—Small orders continue to be pretty numerous.

THE IRON TRADE.—Mr. Geo. Holt (Liverpool) says—During the past year, manufactured iron was free from violent fluctuations. Welsh bars ranged from 5*l.* 15s. to 6*l.* 5s., and show an advance of about 5s. per ton. The better qualities of Staffordshire stood without any alteration, and the middling qualities did not vary more than 5s. per ton. The demand for Staffordshire bars, hoops, sheets, and rods, during the months of June, July, and August, was very heavy, and manufacturers were unable to keep pace with the required deliveries. The orders for Welsh rails, during the last half year have been enormous; most of the works are fully sold for many months to come, and an advance of about 20s. per ton in the year has taken place. Scotch pigs have been quiet, and prices have not varied more than 2s. 6d. to 3s. per ton. The stock is 568,000 tons, being an increase of 95,000 tons. It is to be borne in mind however that 153,500 tons were imported into Scotland from the North of England. The whole production of the Middlesborough district (computed at 1,200,000 tons) has been taken for home consumption and export, and during the last three months the small stock there has been reduced by about 30,000 tons. The present prospects of the trade are more cheering than they have been for several years. The exports from Liverpool of manufactured and other iron have been 339,803 tons, against 370,282 tons in 1867.

THE COPPER TRADE.—Messrs. James and Shakespeare write—Ore and regulus of good produce are scarce, and to obtain any large quantities buyers would have to pay 14s. 9d. to 15s. per unit. In bars we again note extensive sales, about 1400 tons being reported up to Thursday last, from 72*l.* 10s. to 73*l.*, per ton for good current brands cash, 73*l.* 10s. to 74*l.* per ton for arrival and long prompts; Lota and Urmeneta from 72*l.* 10s. to 73*l.* per ton, the purchasers of these last makes being all for arrival. In Urmenita ingots there were a few transactions from 77*l.* to 78*l.* per ton, according to prompt, sellers now asking the last figure for cash. The rise which has taken place in Chili produce is not as yet of much importance; and when it is remembered that in 1857 bars were sold at 128*l.* 10s., there is evidently room for a much greater improvement; the lowest figure touched in 1867 was 67*l.* per ton, the highest 78*l.* per ton. Australian sorts until yesterday were not much dealt in; a few sales of Burra and Wallaroo reported at 84*l.* 10s. to 85*l.*, according to prompt, but even at the latter price there was no great disposition to sell. English raw has met with good enquiry at full rates, and for manufactured there are several orders at 2*l.* to 3*l.* per ton under smelters' prices which cannot be executed; the telegrams from India report much higher prices there, but the quotations are not equal to present prices here. Yesterday telegrams from the West Coast were received, *via* New York, giving the charters for England during the latter half of November as equal to 890 tons of pure copper, of which only 90 tons were in bars, the remainder in ore and regulus; also 800 tons (in ore and regulus) for America, the purchase of which had been advised some time back. This news caused a rather excited market, and prices advanced at once fully 1*l.* per ton, about 400 tons changing hands at that rise, the business being apparently only restricted from holders' unwillingness to sell. In Australian about 400 tons Wallaroo and Burra were taken on terms which have not transpired, and 86*l.* is now asked, cash.

Messrs. Vivian, Younger, and Bond (Jan. 8) say—The past week has been a most active one in the Metal Market, and the new year opens with encouraging prospects. From day to day transactions in Copper have been so numerous and so irregular in price that it is impossible to report the amount of business done or the figures paid. Up to yesterday probably about 1500 tons of bars were done at from 72*l.* to 73*l.* cash, and 73*l.* 10s. to 74*l.* 10s. to arrive. Yesterday telegrams were received advising shipments of only 90 tons bars and 1630 tons fine copper in ore and regulus, and of the latter one-half goes to the United States. This news gave a further spirit to prices, and buyers at once came forward and offered freely 73*l.* 10s. cash and 74*l.* 10s., to arrive, for bars, and 78*l.* for Urmenita ingots, and 14s. 9d. for ores and regulus. Some business was done at these rates, but we close buyers of all at such quotations. In English a fair quantity has been sold, and smelters now ask 20s. to 40s. advance on their quotations for raw sorts; this, however, is principally done in view of the price of the raw material, Australian has participated in the general activity, and 86*l.* is now demanded for Wallaroo. Telegrams from the East advise some advance in prices there, but the quotations do not yet quite correspond with ours here.

THE TIN-PLATE TRADE.—The makers have advanced prices 3s. per box.

The MINING SHARE MARKET has been free from any particular excitement this week, but there has been a fair and steady demand for good mines, both for speculation and investment. Among the latter which have been dealt in are West Chiverton, Marke Valley, Providence Mines, Great Laxey, and East Lovell. Among progressive mines the greatest attention has been paid to West Frances, East Caradon, Chiverton Valley, Rosewall Hill and Ransom United, New Lovell, Great Retallack, Wheal Grenville, Chiverton Moor, Chiverton, Wheal Buller, and a few others.

Tin has again advanced 2*l.* per ton, but the standard for copper ore, at the Ticketing on Thursday, declined 16s. per ton.

Carn Brea, 20 to 22½; Chiverton Valley, 3 to 3¼; Chontales Gold shares dropped to 1⅞, 2, and leave off 2¼ to 2⅜. West Frances shares have advanced to 42, 44: at the meeting to be held on the 14th inst. it is expected the accounts will show a profit of at least 500*l.* on the quarter, and *hoped* that a dividend of 10s. per share may be declared, and put by a sum towards the proposed outlay of 500*l.* for extra stamps. The mine is said to be looking well, and bidding fair to become a permanent dividend mine. East Grenville shares have been in demand at 3¼ to 3¾; the 55 end, which is furthest in advance, is worth 2½ tons of ore per fathom, and the finest looking lode in the mine. The rise above the 110 is worth from 15*l.* to 20*l.* Wheal Grenville, 34s. to 36s.; at the meeting, when a call of 2s. per share was made, we omitted to notice last week that *four* months' costs were charged in the quarter, so as to bring up the costs to the end of November. The agents reported that seeing the length of ground the lode has been productive for tin, with the prospects in the bottom of the mine, they believe it will become a large and profitable one. At present the returns meet the cost, and great things are looked for at the 90 cross-cut north, which has been driven 42 fathoms.

Prince of Wales shares rose soon after our last to 27s., but leave off 22s. to 24s.; the 65 east is 4 ft. wide, worth 6*l.* per fathom. The 65 west is 2 ft. wide, producing stones of copper—saving work. The 45 west, on new south lode, is worth 8*l.* per fathom. The 45 fathom level cross-cut south has intersected the new south lode, which is 1½ ft. wide, with good stones of ore. Rosewall Hill and Ransom United shares have been largely dealt in, at 25s. to 30s. We understand a great improvement has taken place in the western Carbona, which is now 20 ft. wide. At South Wheal Frances meeting, held on Monday, the accounts showed a loss on the two months' working of 12*l.* 12s. 1d., and a balance of 160*l.* 1s. 9d. in hand. The agents state, reviewing the mine for the past two months, that they consider the prospects for tin are improving. The copper department is not quite so productive. Cook's Kitchen, 13 to 14. Drake Walls shares declined to 15s., 17s. 6d., on the notice of meeting, and the expectation of a call. Wheal Crebor shares have been rather sought after, at 6s. to 8s.; we understand that it is the intention of the adventurers to appeal to the trustees of the Duke of Bedford for a remission of a portion of the dues. Upwards of 30,000*l.* have been spent on the property, and considerable sums paid as royalty to the Duke on ores sold, but at present the shareholders have not derived any benefit whatever. East Caradon shares have advanced to 8, 8½. East Lovell, 9 to 9½; Frontino and Bolivia, 8s. to 10s.; Chiverton Moor, 5½ to 6; the lode in the 75 west has improved to 1 ton of lead per fathom. Another important feature here is Clegg's shaft, on the north lode, which, when cut 18 fathoms from surface, was very promising, with soft flookan and lead. The shaft is now down 34 fms., in easy ground; and in the 40 cross-cuts will be put out to cut this lode, and also the main lode, all of which can be accomplished in about two months, and the indications are reported as most favourable for success. Great Laxey, 19 to 20; Great North Laxey, 12s. 6d. to 17s. 6d.

Great Retallack shares have been in demand, and advanced to 2⅝, 3; the lode in the 40 fm. level north has increased in size, and is worth 15 cwts. of lead ore per fm.; the lode in the back of this level is worth 1½ ton of lead ore per fathom, and other improvements indicated. Great Wheal Vor, 10 to 11; Herodsfoot, 42 to 44; Marke Valley, 8⅞ to 9; New Lovell shares have been largely dealt in, at 2½ to 2⅝; North Crofty, 1½ to 1⅝; North Treskerby, 17s. to 19s.; Providence Mines, 33 to 35; South Condurrow, 15s. to 17s. 6d.; St. Ives Consols, 11 to 12; Tincroft, 17 to 18; West Caradon, 2½ to 3; West Chiverton, 58 to 60; West Drake Walls, 5s. to 7s.; West Seton, 180 to 190; Wheal Basset, 60 to 65. Wheal Buller, 7½ to 10; an important point will shortly come off here. Wheal Chiverton have declined to 3, 3⅛; Wheal Kitty (Lelant), 5½ to 6½; Wheal Kitty (St. Agnes, 4 to 4¼; Wheal Margaret, 5 to 5½; Wheal Mary Ann, 20 to 21; Wheal Seton, 65 to 70; Wheal Uny, 3⅜ to 3⅝. Taquaril shares have advanced to 11s., 13s.; the advices are favourable, and report that some of the stuff (of which there is said to be a large quantity) yielded 2 to 2½ ozs. of gold per ton. Don Pedro, 3⅜ to 3⅝; General Brazilian, 9s. to 11s.

The Market for Mine Shares on the Stock Exchange has during the week been active, especially in Brazilian descriptions. The further improvement in the market for metals, of tin, copper, and lead, has given an impetus to the better class of dividend-paying British mines, and the market closes with a firm appearance. Taquaril shares have been largely dealt in; the advices received are favourable. The agent states that already he has taken excellent samples of gold from the vein, and round about it, which produces, from rough calculation, 14 to 18 oits. to the ton; shares are very firm, at 3-16ths to 5-16ths prem. Don Pedro shares are steady at 3 to 3¼; St. John del Rey shares continue flat at 14½ to 15½, though slightly better; Anglo-Brazilian, 1-16th dis. to 1-16th prem.; Chontales are rather dull at 2 to 2¼; Rossa Grande, ⅛ to ¼ prem, and firm; Anglo-Italian, ⅛ to ¼ prem.; United Mexican, 1⅛ to 2; Frontino and Bolivia, ¾ to ⅞; Port Phillip, 1⅜ to 1⅞ per share, and in fair demand; Central American, ¼ dis. to par; Anglo-Argentine, ¼ dis. to par; Sao Vicente have had a good rise, and close at the highest quotation of the week, 2⅜ to 2⅝ prem.; Yudanamutana, 2 to 2¼; Nerbudda Coal, 1⅜ to 1½ dis. In British mines Great Laxey shares have rather improved, and are steady at 19 to 19½; Chiverton shares have fallen to 3, 3⅛; Prince of Wales shares are also lower at 21s. to 23s.; East Caradon shares, on the other hand, have risen to 8, 8¼; Great Vor, 10¾ to 11¼; Caldbeck Fells, 10s. to 11s.; East Lovell, 9 to 9½; Snaefell, 12s. 6d. to 13s. 6d. Glan Alun, 12s. 6d. to 13s. 6d.; the prospects are very good.

New Lovell shares are enquired for. The share list of the Great Western Mining Company has been filled up.

IRISH MINE SHARE MARKET.—New Year's Day being always a close holiday with us, and Saturdays and Mondays not very important on our Stock Exchange, there was not much time between our last report and to-day for transaction in mining securities. Nevertheless, our market experienced wide fluctuations in the shares of the Mining Company of Ireland, which on Saturday last fell to 9*l.* 15s. (7*l.* paid), showing a decline of fully 20s. per share—the result, we regret to say, of the report that the company would after many years of prosperous working for the first time be unable to show a sufficient profit to declare a dividend for the last half-year, owing almost exclusively to the depressed price for copper ore during the first part of the period for which the account has been made up. As will be seen from a further account we intend giving next week of the proceedings of the half-yearly meeting of this company, on Thursday, the 7th inst., the production at the company's mines or their capabilities for further profitable working, has by no means diminished; but the copper market was so depressed that the company made a loss of 4483*l.* on the *valuation* of the stocks of the last half year. On the other hand, the Luganure Lead Mines show a profit for the account half-year of 2033*l.* A slight improvement in the copper market will, as we said on previous occasions, greatly improve the prospects of the shareholders; wherefore, as soon as it was clearly understood that the shareholders' present disappointment simply arose from the low price of copper which ruled some time ago, they wisely abstained from pressing their shares for sale, while others took advantage of the temporary fall to make purchases which has had the effect of raising the market value to 10*l.* 17s. 6d. for cash, making a rise of fully 22s. 6d. per share, leaving off firm. Wicklow Copper shares have been most in request, and advanced to 11*l.* 10s., against 11*l.* 2s. 6d., the previous quotation (2*l.* 10s. paid). Connorree shares have been dealt in at the last rate of 4s. per share, and Cape Copper shares are steady at 13*l.* 5s.

The GREAT NORTHERN MANGANESE COMPANY, to the formation of which, with a capital of 15,000*l.*, in shares of 5*l.* each, reference was sometime since made in the Journal, advertise a prospectus for the issue of the remaining shares at par. The first six months' workings have given a very satisfactory result, and a dividend at the rate of 5 per cent. per annum is about to be declared in consequence. Mr. J. K. Williams, the secretary, has visited the works in company with a competent surveyor, and the result of a very strict survey is that he is more than ever confirmed in previous anticipations, and considers that if all goes well for the next six months, they will then pay 10 per cent. at least. The business is carefully managed, the working expenses are kept as low as possible, and the directors receive no remuneration until the concern has earned and paid to the shareholders in dividends 7½ per cent. per annum.

The GENERAL ACCIDENT AND GUARANTEE COMPANY, with an authorised capital of 250,000*l.*, in 50,000 shares, has just been formed. As indicated by the title, the object of this enterprise is to effect insurances against general accidents, and also to guarantee the fidelity of employees. It is urged that the protection of a public company is obviously preferable to the bond of a private individual, as with the former, the contract being renewable year by year, evidence of the value of the guarantee is annually adduced, and claims are recoverable. As to the accident insurance, which is now being so generally adopted, it appears that no less than 2,000,000 of persons receive injury every year from accidents, more or less serious, and it is very properly contended that every-day occurrences bring most vividly to the public mind the advantages of prudent forethought. In contradistinction to existing companies, the General Accident and Guarantee Insurance Company propose to allow the policy-holders to participate in the profits by a reduced premium to those who shall have been insured five years without making a claim. As mutual profit is better secured under an extensive rather than a limited average, this office is likely to afford shareholders a more certain increase of dividends, and to policy-holders a more immediate increased guarantee in accumulating reserves. It is provided by the Articles that interest at the rate of 5 per cent. per annum be payable to the shareholders before the first and between the subsequent quinquennial valuations. At the periodical declarations of profit the surplus profit over 5 per cent. will be credited to the shareholders by way of payments on their shares, so as to increase the dividends, while paid-up shares will be entitled to receive their part of the surplus in cash. The successful experience of the few offices devoted to this increasing class of business is referred to as a precedent in favour of the General Accident and Guarantee Company, by affording the utmost insuring advantages upon the most moderate premium.

At Redruth Ticketing, on Thursday, 685 tons of ore were sold, realising 2793*l.* 3s. 6d. The particulars of the sale were:—Average standard, 105*l.*; average produce, 6½; average price per ton, 4*l.* 1s. 6d.; quantity of fine copper, 44 tons 11 cwts. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Dec. 10 ..	1703	£103 3 0	6¼	£3 11 0	11s. 7½d....	£58 2 6
„ 17 ..	3038	104 11 0	6½	4 0 6	12 5	62 4 0
„ 24 ..	1703	98 16 0	8	5 2 0	12 10	64 4 0
„ 31 ..	1453	101 5 0	7¾	5 0 6	13 1	65 9 6
Jan. 7 ..	685	105 0 0	6½	4 1 6	12 7	62 14 0

Compared with last week's sale, the decline has been in the standard 16s., and in the price per ton of ore about 1s. Compared with the corresponding sale of last month, the advance has been in the standard 3*l.* 10s., and in the price per ton of ore about 5s.

At the Foxdale Mines (Isle of Man) quarterly meeting, on Jan. 2, the directors declared a dividend of 10s. per share.

At the Lucy Phillips Gold and Silver Mining Company special general meeting, convened for the purpose of considering Dr. Bishop's report, and to adopt such measures in regard thereto as may seem fit, it was unanimously agreed that the directors be authorised to raise a sum not exceeding 20,000*l.*, by the issue of debentures of not less than 5*l.* each, for the term of five years, and carrying interest at the rate of 20 per cent. per annum, with power to any debenture holder to convert such debentures into ordinary shares at par at any time within two years from the date of issue.

The Vancouver Coal Mining and Land Company declared the sum of 14,799*l.* 3s. 4d. in dividends during 1868.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT an increase in the "notes issued" of 37,575*l.*, which is represented by a corresponding increase in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there is shown a decrease in the "public deposits" of 835,399*l.*, an increase in the "other deposits" of 6844*l.*, in the "seven day and other bills" of 20,738*l.*, and in the "rest" of 96,878*l.*, together 124,460*l.*=710,939*l.* On the asset side of the account there is shown a decrease in the "Government securities" of 140,164*l.*, and in the "other securities" of 134,353*l.*=274,517*l.*, leaving a decrease in the total reserve of 436,422*l.*

COAL MARKET.—The fresh arrivals this week numbered 162 ships. The demand for house coals has been inactive, and prices quote a slight reduction on last week's currency. Hartley's have been steady at previous value. Haswell Wallsend, 17s. 6d.; Elliot's Wallsend, 17s.; Eden Main, 15s. 6d.; South Hartlepool Wallsend, 15s. 6d. Unsold 15 cargoes; 70 ships at sea.

ANOTHER ACCIDENT AT WIGAN (*By Telegraph*).—On Thursday, at noon, the pillars of the No. 7 Pit of the Rainford Coal Company took fire, it is supposed from the furnace. Seven men attempted to extinguish the flames, but a sudden gust of gas was given forth, and catching the blaze it came suddenly upon the unfortunate men, and burnt them severely. Three expired yesterday (Friday); two are not expected to survive; and the other two remain in a dangerous state. Both shafts of the mine have now been closed, to extinguish the flames.

Mr. C. B. King has been appointed the voluntary liquidator of the Peruvian Mineral Company. Mr. King will act in a honorary capacity.

BRAZILIAN STREET RAILWAY COMPANY (Limited).—The receipts for November amount to about 1909*l.*, as compared with about 1455*l.* for November, 1867.

SIPHON FEED-WATER REGULATOR.—The apparatus introduced by Messrs. BECKMAN and Co., of Newburgh, U.S., consists of a water-dome, provided with three pipes, one leading to the feed-pump, and the other two into the boiler; of the latter, one terminates at the correct water level, and the other near the bottom of the boiler. On the water falling below the proper level the steam forces the water from the dome into the boiler, and acts upon a valve which admits fresh feed-water to the dome.

TO IRON AND LEAD MERCHANTS, BROKERS, &c.

THE MERSEY DOCKS AND HARBOUR BOARD have a QUANTITY of OLD METAL, which they are willing to DISPOSE OF—viz.:

About ONE THOUSAND TONS heavy SCRAP IRON, consisting chiefly of WROUGHT IRON and TEMPORARY RAILS.

About FIFTY TONS LEAD, in PIGS and SCRAP.

The whole is of excellent quality, being from the best description of material which is usually purchased by the Board, and may be seen on application at the Engineer's Office, Dockyard, Coburg Dock.

The conditions of sale are—that the metal, of the description stated, be taken as it now lies, at the rate of 2240lbs. per ton; that it be weighed on the machines belonging to the Board; and that a deposit, of such amount as the engineer shall decide, be placed in the hands of the dock Treasurer, whose receipt therefor must be produced at the engineer's office prior to the issue of an order for delivery. The workmen of the Board will load the metal into the carts of the purchasers.

Any further information required may be obtained on application at the Engineer's Office, south side of Coburg Dock, until 5 P.M. on Wednesday, the 13th proximo.

Sealed Tenders, to be addressed to the "Chairman of the Committee of Works," and left at the Dock Secretary's Office, Revenue-buildings, not later than 10 A.M. on Thursday, the 14th proximo.

The Board do not bind themselves to accept the highest or any tender, and reserve the power to the engineer to make any selections he may consider desirable from the old metal as it is turned out for delivery.

By order of the Board,
JOHN HARRISON, Secretary.

Dock Office, Revenue-buildings, Liverpool, December 24, 1868.

LOCOMOTIVE TANK ENGINE.

WANTED,—A SECONDHAND TANK ENGINE, 4 ft. 8½ in. gauge, 10 or 12 in. cylinders, to run between mines and works.
Address, with full particulars, "The Manager," FURNESS IRON AND STEEL WORKS, Askam-in-Furness.

TO CAPITALISTS.

£50,000 WANTED, TO OPEN A VALUABLE COAL ROYALTY.—The lessees will be ready to treat with Gentlemen disposed to embark in this adventure, on liberal conditions. It is preferred that not more than five persons be admitted to join.
A PROFIT of TWENTY PER CENT., or upwards, may be anticipated.
Applications, by letter only, from principals, or their solicitors, may be addressed to Mr. JONES, care of John George Brown, Esq., Solicitor, Newcastle-on-Tyne.

TO COLLIERY OWNERS, AND OTHERS.—A COLLIERY VIEWER, brought up in the NORTH OF ENGLAND, and having twenty years' subsequent experience at collieries of extent and importance in England and Wales, WISHES for an APPOINTMENT. Will undertake to devote the whole of his time to the duties of an office entrusted to him, and have the works conducted on principles of safety and economy.
Testimonials may be seen at the MINING JOURNAL Office; or they will be forwarded, with references of the highest character, by addressing to "C. V.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

COAL.—A Gentleman, who has acquired THREE HUNDRED ACRES of LAND from the Government of Tasmania, WISHES to MEET with a PARTNER to ASSIST in BRINGING the VALUABLE CANNEL COAL found thereon into the MELBOURNE MARKET.
For particulars, apply to Mr. A. NORMAN TATE, Analytical Chemist, No. 7, Irwell-chambers, Oldhall-street, Liverpool.

COLLIERY FOR SALE, comprising EIGHT HUNDRED ACRES of SMOKELESS STEAM COAL, eight miles from seaport. Railway and canal running through the property. Royalty, 6d. per ton. Price, £4500. Payment, £1500 cash, and £1000 per annum for three years, without interest. Or a PARTNERSHIP might be arranged with the present owner.
For further particulars, apply to Mr. ALFRED HINDE, Bookseller, Dudley-street, Wolverhampton.

A MEDICAL MAN of extensive practical experience (well qualified and registered), and thoroughly conversant with every branch of his profession, is DESIROUS of OBTAINING an APPOINTMENT as SURGEON to MINES or PUBLIC WORKS.
Address, in the first instance, to "M. D.," care of Mr. G. Sant, Goods Managers' Office, Shoreditch Station.

TO CAPITALISTS.

A GENTLEMAN holding LEASES of valuable MINING SETTS of TIN, COPPER, and CHINA-CLAY, which cannot fail to be very profitable when worked, requires ASSISTANCE to FORM a COMPANY to develope the same.
For particulars, apply to Mr. H. UNDERHILL, Bath-street, Leamington.

A MANUFACTURER of a MANURE, established sixteen years, WISHES to APPOINT a few RESPECTABLE AGENTS. Good commission.
Address by post, with occupation, &c., "Manure Agency," at 158, Bishopsgate-street Without, London.

PARTNER WANTED, in a SAFE UNDERTAKING, to produce ONE HUNDRED PER CENT. Capital required, £1000.
Apply to "L. H. M.," MINING JOURNAL Office, 26, Fleet-street, London, E.C

SLATE QUARRY.—The Advertiser has recently COMMENCED DEVELOPING a very EXTENSIVE SLATE ROCK in NORTH WALES, and already obtained a considerable quantity of good slates. The facilities for working are unusually good, and an expenditure of £1000 or £2000 more will bring the quarry into paying condition.
Any gentleman willing to spend that sum on the quarry for one-fourth share in the undertaking can have further particulars on application, by letter, to "T. N. W.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

TO CAPITALISTS.

WANTED, ONE or MORE PARTNERS to WORK a most important and valuable discovery of TWO VEINS of SLATES, of the richest and best of quality, one of green and the other blue, of an immense width, running parallel together, with every advantage to make them one of the first works in North Wales. It is situated close to the late Lord Palmerston's quarries, Festiniog, and within a mile of the railway. Plenty of water-power to work machineries. Produces first-rate slabs and slates within a few feet from surface.
For further particulars, apply to Mr. ROBERT JONES, Slate and Slab Merchant, Llanrwst, North Wales.

WANTED, by a Young Man (aged 23), a SITUATION as ASSISTANT MANAGER and BOOKKEEPER at a Mine. Has had five years' experience. Would have no objection to go abroad.
Address, "A.B.," Post Office, Mold.

WANTED,—In an ENGINEER'S OFFICE, a DESIGNING DRAUGHTSMAN. Must be able to act as correspondent.
Apply to "S. C.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED,—A CONDENSING PUMPING ENGINE, on the Cornish principle, of from 60 to 80-horse power, with BOILERS, complete.
Full particulars, as to size of piston, length of stroke, price, &c., and distance from railway station, to be forwarded to Capt. J. KITTO, Belle Vue, Shrewsbury, not later than Monday, the 25th January inst.

WANTED,—A GOOD SECOND HAND WHIM ENGINE, with BOILERS and GEARING, complete.
Not less than 60-horse power.
Address, with full particulars, to Mr. G. H. CARDOZO, 15, New Broad-street, London, E.C.

CORNWALL HEMATITE COMPANY (LIMITED).—FOR SALE, FIVE SHARES of £10 each, fully paid.
No reasonable offer refused. These shares have been selling at £2 premium.
See previous MINING JOURNALS.
Apply to Mr. CUGNY, 5, Kinnerton-street, Knightsbridge.

TO BE SOLD, BY PRIVATE CONTRACT, the MANAGER'S PART of a COPPER and TIN MINE in CORNWALL.
Steam-power has been provided, and both copper and tin lodes will soon be cut at a depth which must ensure large returns.
Hundreds of thousands of pounds worth of ore have been sold from these and parallel lodes in the immediate district on all its boundries, while this has been unwrought.
An opportunity rarely met with now offers itself.
Apply to Messrs. MAY and MURCH, Auctioneers, Plymouth.

SILVER-LEAD MINE.—A FIFTH SHARE FOR SALE of ONE of the most PROMISING SILVER-LEAD MINES in the KINGDOM. Price, £2000.
The above FIFTH could be PURCHASED by ONE or MORE.
None need apply who do not embark for investment.
For full particulars, and engineers' reports, address—"O. P.," Messrs. Lee and Nightingale, 16, Castle-street, Liverpool.

ON SALE,—An EXCELLENT SLATE QUARRY, called the WAUNFAWR SLATE QUARRY, situated near HARLECH, NORTH WALES. The slates are similar in quality, colour, grain, and durability to the Festiniog slates.
For particulars, apply to Mr. WALTER DAVIES, Bethania, Festiniog, North Wales.

IMPORTANT TO CAPITALISTS.

FOR SALE,—SEVERAL MINES—LEAD, SILVER, MANGANESE, and PHOSPHATE OF LIME—close to rail and river, near the RHINE, GERMANY.
Particulars of Mr. P. BANTZ, 70, Lower Thames-street.

In the Matter of the Companies Act, 1867,
AND IN THE MATTER OF
THE PORT PHILLIP AND COLONIAL GOLD MINING COMPANY
(LIMITED AND REDUCED).

NOTICE IS HEREBY GIVEN, that a PETITION for CONFIRMING a RESOLUTION reducing the CAPITAL of the above company from £500,000, divided into 100,000 shares of £5 each, to £200,000, divided into 100,000 shares of £2 each, was, on the 17th day of December, 1868, presented to the Lord Chancellor, and is now pending, and that the list of creditors of the company is to be made out as for the 31st day of January, 1869.
YOUNG, MAPLES, TEESDALE, AND NELSON,
No. 6, Frederick's-place, Old Jewry, in the City of London,
Solicitors to the company.

THE EAST DEL REY MINING COMPANY (LIMITED).—(IN LIQUIDATION.)
Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the Shareholders of the above-named company will be HELD at the London Tavern, Bishopsgate-street, London, on FRIDAY, the 22d day of January, 1869, at One o'clock, for the purpose of either appointing a person to act as Liquidator in the winding-up of the affairs of the above-named company, in the place of Mr. John Phillips, deceased, or of authorising Mr. Frederick William Smith, the surviving Liquidator, to continue the winding-up of the affairs of the said company alone, and as sole liquidator.
FRED. W. SMITH, Surviving Liquidator.
Dated this 6th day of January, 1869.

THE GREAT NORTHERN COPPER MINING COMPANY OF SOUTH AUSTRALIA (LIMITED).
Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders of the Great Northern Copper Mining Company of South Australia (Limited) will be HELD at the London Tavern, Bishopsgate-street, London, on MONDAY, the 18th day of January, at One o'clock precisely, to receive the directors' report; to take into consideration the state of affairs of the company; and on other business.
J. WILSON, Manager pro tem.
16A, Tokenhouse-yard, London, January 7, 1869.

THE NERBUDDA COAL AND IRON COMPANY (LIMITED).
Notice is hereby given, that a SPECIAL GENERAL MEETING of the above company will be HELD at the London Tavern, Bishopsgate-street Within, London, E.C., on THURSDAY, the 14th day of January inst., at Two o'clock, when resolutions will be proposed for the purpose of subdividing the present shares of the company into shares of the value of £1 each, and for making such amendments in the Memorandum and Articles of Association of the said company as may be necessary for effecting that purpose, or consequent thereon.
By order of the Board,
HERBERT HEATH, Secretary.
36A, Moorgate-street, London, E.C., 4th January, 1869.

Geology,—King's College, London.

PROF. TENNANT, F.G.S., WILL COMMENCE a COURSE of LECTURES ON GEOLOGY on FRIDAY, January 22, at Nine A.M. They will be continued on each succeeding WEDNESDAY and FRIDAY at the same hour. A SHORTER COURSE will be given on THURSDAY evenings, from Eight to Nine: first lecture, January 21. Text book, Lyell's Elements of Geology. Prof. TENNANT accompanies his students to the Public Museums, and to places of Geological interest in the country. He gives PRIVATE INSTRUCTION in MINERALOGY and GEOLOGY at his residence, 149, Strand, W.C.

Dog Licences.
CAUTION.
INLAND REVENUE, SOMERSET HOUSE, LONDON.

THE COMMISSIONERS OF INLAND REVENUE give notice that all DOG LICENCES granted in the year 1868 EXPIRED on the 31st December last, and every person keeping a dog in the current year is required FORTHWITH to TAKE OUT a NEW LICENSE.
The duty payable for each dog kept is FIVE SHILLINGS.
The penalty for keeping a dog without license is FIVE POUNDS.
A license is not transferable from one person to another.
A license may be obtained by the owner giving his name and address, and the name of the place where the dog is kept, on application at—
The Office of the Collector of Inland Revenue; The Office of the Distributor of Stamps; or A Money Order Post-Office. } In the neighbourhood of the applicant's residence.
Licences will also be granted by the several Supervisors of Inland Revenue.
Persons residing at a distance from any of the above offices, by transmitting with their application Inland Revenue (Receipt), or Postage Stamps for the proper amount of duty, to the Collector of Inland Revenue for the District, will receive a license in return by post.
WM. CORBETT, Secretary.
Inland Revenue, Somerset House, London, 1st January, 1869.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 1—	Minera	100	£12 10 6	P. Glover.
—	ditto	100	12 8 6	Walker, Parker, & Co.
—	ditto	32	12 8 6	ditto
—	ditto	24	12 8 6	ditto
—	ditto	24	12 8 6	Panther Lead Co.
—	ditto	100	12 8 6	Walker, Parker, & Co.
—	ditto	9	12 8 6	ditto
—	ditto	9	12 8 6	A. Eyton.
—	ditto	44	12 11 6	Walker, Parker, & Co.
5—	Maes-y-safn	60	12 11 0	Panther Lead Co.
—	ditto	55	12 10 0	ditto
—	ditto	25	12 12 0	ditto
7—	Wheal Trelawny	75	24 1 6	Sheldon, Bush, & P.S. Co., & Treffry's Exrs.

ROMAN GRAVELS MINE sold during the year ending Dec., 1868:—

Lead ores	954 t. 8 c. 0 q.,	realising, after deducting royalty,	£10,473	15 10
Blende ores	59 4 2	„ „ „	175	5 5
Total			£10,649	1 3

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 1—	Minera	100	£ 4 1 6	H. Southern.
—	ditto	46	4 3 0	ditto
—	ditto	27	3 15 6	Kenrick and Son.
—	ditto	27	3 15 6	H. Southern.
—	ditto	47	2 5 6	ditto
—	ditto	38	3 3 6	ditto

BLACK TIN.

Date.	Mine.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchasers.
Jan. 1—	West Godolphin	3 4 2 11	£64 0 0	£206 14 3	—
2—	Kitty (St. Agnes)	5 8 0 26	63 10 0	343 12 8	—
6—	West Wh. Kitty	1 8 2 4	57 15 0	82 7 9	Truro Tin Co.

COPPER ORES.

Sampled Dec. 23, and sold at Tabb's Hotel, Redruth, Jan. 7.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
West Basset	66	£2 10 0	Prosper United	18	£5 6 6
ditto	61	3 12 6	ditto	16	3 8 6
ditto	58	5 13 6	Rorth Roskear	54	5 7 6
ditto	29	2 6 6	South Condurrow	29	8 9 0
East Rosewarne	54	3 12 0	Tresavean	25	2 0 6
ditto	42	7 1 0	Wheal Buller	18	4 16 6
ditto	36	3 3 0	ditto	1	7 17 6
ditto	22	3 10 6	Fanny Adela	13	1 18 0
Copper Hill	43	2 3 6	South Dolcoath	12	2 12 6
ditto	54	6 5 0	Huthnance's Ore	7	1 10 0
Prosper United	37	2 15 0			

TOTAL PRODUCE.

West Basset	224	£805 19 0	Tresavean	25	£ 50 12 6
East Rosewarne	154	681 9 0	Wheal Buller	19	94 14 6
Copper Hill	77	306 0 6	Fanny Adela	13	24 14 0
Prosper United	71	252 8 0	South Dolcoath	12	31 10 0
North Roskear	54	290 5 0	Huthnance's Ore	7	10 10 0
South Condurrow	29	245 1 0			

Average standard ..... £105 0 0 | Average produce 6½
Average price per ton £4 1 6
Quantity of ore ..... 685 tons | Quantity of fine copper .. 44 tons 11 cwts.
Amount of money £2793 3 6
LAST SALE.—Average standard ..... £101 5 0—Average produce 7¾
Standard of corresponding sale last month, £103 3 0—Produce, 6¼.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	50	£ 126 9 0
Freeman and Co.	43	93 10 6
Grenfell and Sons	155½	879 13 6
Sims, Willyams, and Co.	119	632 13 9
Williams, Foster, and Co.	76	271 19 0
Mason and Elkington	116	366 12 0
Bankart and Sons	1	7 17 6
Copper Miners' Company	124½	414 8 3
Total	685	£ 2793 3 6

NO SALE on Thursday next, January 14.

Copper ores for sale at the Royal Hotel, Truro, on Thursday week—Mines and Parcels.—Devon Great Consols 1407—Marke Valley 500—Wheal Crelake 230—West Maria and Fortescue 203—East Caradon 195—Bedford United 180—Kelly Bray 150—Gunnislake (Clitters) 116—Prince of Wales 112—Wheal Friendship 109—Bampfylde 57—East Russell 50—Belstone 13.—Total, 3322 tons.

NO. 1.—READY IN JANUARY.

SPONS'
DICTIONARY OF ENGINEERING,
Civil, Mechanical, Military, and Naval,
WITH
TECHNICAL TERMS IN FRENCH, GERMAN, SPANISH, AND ITALIAN.

The work will be completed in about 60 Numbers, containing many thousands of Engravings.
Each Number will consist of 32 pages, super-royal 8vo. Price One Shilling.

LONDON: E. AND F. N. SPON, 48, CHARING CROSS. Sold by all booksellers and newsvendors.

PREPARING FOR IMMEDIATE PUBLICATION, BY M. AND M. W. LAMBERT, NEWCASTLE-ON-TYNE,
A PRACTICAL
TREATISE ON MINE ENGINEERING.
By G. C. GREENWELL, F.G.S., COLLIERY VIEWER,
MEMBER OF THE NORTH OF ENGLAND INSTITUTE OF MINING ENGINEERS, &c., &c., &c.
SECOND EDITION.

The work has been entirely re-written, and contains numerous new illustrations, in addition to the original ones.
To be published in about sixteen monthly parts. Each part to contain twelve pages of letterpress, with four carefully lithographed illustrations printed in colours. Part I. will be ready early in January, 1869.
PRICE OF EACH PART, TWO SHILLINGS AND SIXPENCE.

A LARGE AMOUNT of MONEY being EXPENDED in ADVERTISING in WORTHLESS PUBLICATIONS, C. H. MAY will be HAPPY to AFFORD INFORMATION to ADVERTISERS in the SELECTION of the BEST an MOST INFLUENTIAL.
C. H. MAY'S GENERAL ADVERTISING OFFICES.
ESTABLISHED 1846.
ADVERTISEMENTS inserted in all the London Provincial, Foreign, and Colonial Newspapers.
78, GRACECHURCH STREET, CITY, E.C.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

NORTH TRESKERBY.—Each shareholder is indebted to the timely warning which was given in last week's Journal against being duped by the proffered advice, gratuitously conveyed in private circulars, for by the same post which brought your Journal I received "the opinion of an eminent practical authority" to at once dispose of my interest in the mine. It had, however, previously come to my knowledge that the largest local holders were largely increasing their interest through a Stock Exchange broker, which conclusively proved the correctness of the statements which appeared in last week's Journal. I think it is high time that your powerful pen should be employed in eschewing this vicious system, and I think you should not hesitate to give publicity to the names of those who are always foremost in the contemptible rank.—ANOTHER SHAREHOLDER.

DIPHWYS CASSON SLATE COMPANY.—Can any of your correspondents give any information how this company is progressing?—T. B.

SCALE FOR ADVERTISEMENTS.—To avoid the necessity of frequent application we may state our charge for general advertisements is—for six lines and under, 4s.; per line afterwards, 8d. Average, twelve words per line.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, JANUARY 9, 1869.

THE COAL AND IRON TRADES.

Evidences at once of the ability and the readiness of the coal and the iron trades of Great Britain to move with the times are not wanting. In our article last week upon the Prospects of our Mineral Industry indications of what is going on appear, but specific mention of other conspicuous traces of progress deserve to be placed upon record. We have been told, as a nation, that masters and men alike are sadly uneducated in those principles of their craft in which some of their foreign competitors display superiority. We admit it. We are better men than our competitors, nevertheless, and our superiority, as a whole, shall soon become conspicuous. This is the determination which seems to influence the proprietors and the managers of our mines and our iron works. The good people who, to their credit, are ever ready to express their warmest sympathy with "the poor collier" are not the only friends of the miner. The capitalists who find the money which he takes home as wages to support his family, the mining engineer who lays out the workings in which he earns his wages, and the overlooker under whose immediate supervision his daily toil is prosecuted—these all are anxious that he should labour with as little sacrifice of health and life as is possible in such an avocation. That he may do so supplies a greater impulse to them in the continuing of their own professional studies than is found in a desire to win the mines at a lower pecuniary cost. But they know that it is not sufficient that they should themselves keep abreast of the times. The miner must himself be educated. Whilst, therefore, we have associations of masters and mine agents increasing in number and in efficiency in every part of the kingdom, and all these desiring each to receive benefit from the other, by working as from one centre, we have action taken by the head of the whole which shall make the workmen partakers in the common good.

Lest our testimony should be thought partial, we ask the reader's attention to that of the *Daily Chronicle* of Newcastle—a paper conspicuous for its advocacy of those sentiments which are received with great favour by very many of our operatives. In its leading columns of Tuesday last it is said:—

"The United Coal Trade Association, urged by an intelligent desire to promote the spread of scientific instruction amongst the mining population of Durham and Northumberland, have for some time past directed their attention to this important subject. The association has been assisted in its deliberations by the Institute of Mining Engineers, amongst whose members are to be found many of the most eminent practical miners and civil, mechanical, and naval engineers in the North of England. Under the auspices of a committee chosen from the latter body, a scheme has been organised which—although only some two months in operation—has been attended with the most gratifying results. A gentleman of high scientific attainments, and well acquainted with the details of the system adopted by the Government Department of Science and Art, has been engaged to superintend the entire work. He is now occupied in organising special schools in the colliery villages, the care of which will be handed over to local masters so soon as the necessary number of certificated teachers can be found. Classes have already been formed at Blyth, Elswick, North Hetton, and Monkwearmouth, in which upwards of 300 pupils are now receiving instruction in geometry, drawing, and other branches of technical education. Arrangements are also in a forward state for opening similar classes at Blaydon, Seaham, Seaton Delaval, and Ryhope. The Coal Trade Association and the Institute of Mining Engineers are alive to the advantages which must result from the scientific and artistic training of working men, and the enlightened zeal and liberal spirit with which they have entered into this patriotic work are deserving of all praise."

It is satisfactory to find it added by the same authority, "We have full confidence that they will be warmly seconded in their generous efforts by the classes at whose special advancement they aim." We commend what is being done in the North to our mining engineers elsewhere. Let that course be pursued with vigour, and we shall soon diminish the number of our terrible explosions. If the men will only supplement such efforts with the earnestness of which they are capable, we shall not then hear of firemen making only a cursory examination of a mine—of their being careless of a disarrangement of a ventilation cloth, of shots being indiscriminately fired, of lamps being wilfully or even carelessly punctured, much less of tobacco being smoked amidst carburetted hydrogen.

What the ironmasters are doing is indicated by the readiness with which the proposition of an Iron and Steel Institute has been taken up. That association in full work, we shall find the knowledge of the most approved principles of iron manufacture not only extending amongst the masters, but likewise the managers and the men, for it contemplates the increased technical education of all. The determination of our ironmasters to occupy, as they should, the forefront position of their order, is still further indicated in the machinery which already they are adapting to the several processes of their manufacture. What, for instance, can compare with the Wigan Iron and Coal Company's great blowing-engines, which have just been started, and a description of which was given in the *Mining Journal* of Dec. 26? Correctly Mr. CHARLES HODGSON spoke when those engines were inaugurated, when he remarked:—

"I am warranted in saying that having visited many of the larger works abroad, and knowing most of the great works in England, I sincerely wish that some of those who took an adverse view of the state of English progress had been here to-day. I say that these works are a sample of the position of iron manufacture at the present day, and that they are crowned by the engines which we have seen stated for the first time. I say, without in the slightest degree denying the superiority in the practice seen in some continental establishments to practice which we have seen in some English establishments, that we have as fine and as scientific works in England as any to be found on the Continent; and I say also that in practice the continental ironmasters have learned from us, and not we from them. In the investigation of the state of any manufacture at any given time, regard must be had to the date at which capital was put into that manufacture. If you go back 20 years you find that the enterprising men of those days put their capital to the best of their lights in the business in which they were engaged. It is impossible to suppose that every new discovery is sufficiently in advance of what was immediately before it to make it advisable as a commercial undertaking, that those old plans which were good at the time should be at once abrogated. Therefore, like many an old steam-packet company, who are still prosperous, we have this against us—that we possess many arrangements which 20 years ago were admirable, but which it would be very questionable whether a prudent commercial man could at this moment, or at any given moment, give up. English enterprise, and enterprise in the North especially, is sufficiently advancing, when we come to think of the financial interest of it. It takes improvements, which clearly show that gain can be had, on the whole, by adapting them, and it holds back until that is proved."

But the Wigan are not the only powerful blowing-engines which are about to be applied by the ironmasters of this country. There are now in hand, at the works of one of our machinist firms, four blowing-engines, by which 50,000 cubic feet of air per minute will be obtained for blast purposes; and the same firm have just completed a universal mill, for use in the manufacture of English finished iron. With a mill of this class it will be remembered that great things have been done upon the Continent. Here, however, it will be used, in the first instance, for the rolling of long narrow plates, without shearing. The largest grain rolls yet made the world over are, it is known, about to be put into use at the works of Sir JOHN BROWN and Co. Near to the place at which these were cast there is now being turned a pair of chilled rolls, for one of our leading producers of finished iron, which are believed to be the largest rolls of their class ever made.

THE COAL TRADE—ANNUAL REVIEW.

Mr. J. R. Scott, the Registrar of the London Coal Market, has published the following statistics of imports and exports of coal into and from the port and district of London by sea, railway, and canal during the year 1868:—

IMPORTS.

By Sea.	Ships.	Tons.
Newcastle	2927	1,471,360
Seaham	540	142,454
Sunderland	1621	789,081
Middlesborough	160	61,308
Hartlepool	1344	400,845
Blyth	12	7,529
Scotch	92	25,724
Welsh	123	37,044
Yorkshire	198	24,193
Liverpool	1	139
Foreign, Westphalia	1	165
Duff	1	270
Small coal	22	12,533
Cinders	65	7,878
Culm	3	707
Total	7110	2,981,230
Imports during the year 1867	6977	3,016,416

By Railway and Canal.	Tons. cwt.
London and N.-Western	1,059,177 13
Great Northern	938,405 0
Great Western	442,450 0
Midland	184,701 9
Great Eastern	316,408 19
South-Western	22,731 10
London, Chatham, and Dover	4,546 13
London, Tilbury, and Southend	589 0
South-Eastern	11,323 3
Grand Junction Canal	8,963 5
River Lea	613 5
River Thames, *via* Weybridge	11 0
Total	2,988,860 17
Imports during the year 1867	3,305,617 18

COMPARATIVE STATEMENT, 1867 AND 1868.

By Sea.	Ships.	Tons.
Jan. 1 to Dec. 31, 1867	6977	3,016,416
Jan. 1 to Dec. 31, 1868	7110	2,981,230
Decrease in pres. year	—	35,186
Increase in pres. year	133	—

By Railway and Canal.	Tons. cwts.
Jan. 1 to Dec. 31, 1867	3,305,617 18
Jan. 1 to Dec. 31, 1868	2,988,860 17
Decrease in present year.	316,757 1

EXPORTS.

Export list, showing the distribution of coal imported into the port or district of London by sea, rail, and canal, and afterwards exported coastwise or to foreign parts, or sent beyond limits of London district, by rail or inland navigation, during the year 1868:—

	Tons.	Tons.
1.—Railway-borne coal passing *in transitu* through district		287,861
2.—Sea-borne coal exported to British possessions, or to foreign parts, or to the coast	384,673	
Ditto, sent beyond limits by railway	110,665	
Ditto, by canal and inland navigation	47,283	= 542,621
3.—Railway-borne coal exported to British possessions, or to foreign parts, or to the coast	121,055	
Ditto, by rail beyond district	448	
Ditto, by canal and inland navigation	3,839	= 125,402
4.—Sea-borne coal brought into port and exported in same ships		10,339
Total quantity of coal conveyed beyond limits of coal duty district during the year 1868		966,223
Ditto, the year 1867		902,150

Subjoined is a Review of the Coal Trade of the past year:—

The London coal trade during the past year, as the imports by sea and railway into the metropolis show, exhibits a great decline from the imports of the previous year.

This is to be accounted for, partly by the fact of a glut of coal forced on the London market during the latter portion of 1867, in consequence of the stagnation in the iron trades (now happily showing signs of revival), whereby a large stock was on hand at the commencement of this year, and partly to the exceptionally warm weather experienced throughout to its close, and to the continued depression in the large manufacturing trades, especially in the East of London.

This decrease in imports is, however, mostly apparent in the surplus by railway (over 300,000 tons in the year), notwithstanding the additional means of supply furnished during the year by the direct transmission of coal over their own line by the Midland Railway Company to London.

The decrease by sea is comparatively small as compared with the supply by railways, and amounts to 35,000 tons only. Thus it may be considered that the seaborne trade has during 1868 held its own, while that of the railways has comparatively retrograded.

As regards the exports of coal from the Port of London and its distribution through and beyond the limits of the coal duty district, averaging 16 miles from the centre of London, little remark is necessary beyond the fact that the total distribution beyond the limits exhibits the large increase of 80,000 tons in the year 1868, shown as compared with the year 1867 by an increase; firstly, by the consumption of coal for ocean-going steamers of 27,000 tons; secondly, by an increased supply of inland coal to Brighton and elsewhere on the Brighton system of railways of 18,000 tons; thirdly, by an increased export to British possessions of 8000 tons, likewise of coal and coke, to the Thames coast; westward, for cement and brickmaking purposes, of 10,000 tons; and a slight increase in the supply of coal beyond the limits of the South-Western line of 4000 tons; and, lastly, by a slight though satisfactory increase of 1400 tons, in the way of revival of traffic in coal up the River Thames beyond its tidal influence.

Thus it is shown that while the import of coal into London during the last year has materially diminished, such diminution has not prejudicially affected the export trade or the supplies beyond the metropolis. Lastly, it is to be hoped, when trade revives and the Money Market permits, that such useful projects as the North Metropolitan and Great Western and South Wales direct lines of railways, sanctioned in 1866 by the wisdom of Parliament, may find favour with the public, as tending, when constructed, most materially to lessen the cost of distribution of coal to London, both to manufacturer and consumer.

COAL IN FRANCE.—The total quantity of coal imported into France in the first nine months of last year was 4,743,213 tons, as compared with 4,874,667 tons in the corresponding period of 1867, and 4,846,610 tons in the corresponding period of 1866. France does not, then, appear to be becoming more dependent upon her neighbours than hitherto for her coal supply. Of the coal imported into France to Sept. 30 last year, 1,299,801 tons came from the United Kingdom, 2,582,887 tons from Belgium, and 860,319 tons from the Zollverein. In the first nine months of 1867 the corresponding receipts stood thus:—From the United Kingdom, 1,436,322 tons; from Belgium, 2,538,652 tons; and from the Zollverein, 851,901 tons. In the first nine months of 1866 the corresponding receipts stood thus:—From the United Kingdom, 1,231,425 tons; from Belgium, 2,814,687 tons; and from the Zollverein, 800,311 tons.

THE EXPORT COAL TRADE.—The quantity of coal exported from the United Kingdom in November, 1868, was 732,399 tons, as compared with 913,825 tons in November, 1867, and 790,109 tons in November, 1866. In these totals the exports to France figured for 138,577 tons in November, 1868, as compared with 146,874 tons in November, 1867, and 185,579 tons in November, 1866. In the eleven months ending Nov. 30 last year, the aggregate shipments of coal from the United Kingdom amounted to 10,042,111 tons, as compared with 9,745,845 tons in the corresponding eleven months of 1867, and 9,257,210 tons in the corresponding eleven months of 1866. In these totals the exports to France figured for 1,722,377 tons in the first eleven months of last year, as compared with 1,850,130 tons in the corresponding period of 1867, and 1,708,315 tons in the corresponding period of 1866. The exports of coal increased, to Nov. 30 last year, to Russia, Sweden, Denmark, Prussia, the Hanse Towns, Italy, and Brazil: but they decreased to Holland, Spain, the United States, British India, &c. The value of the coal exported in November, 1868, was 368,713*l.*, as compared with 475,304*l.* in November, 1867, and 415,701*l.* in November, 1866; and in the eleven months ending Nov. 30 last year 4,963,684*l.*, as compared with 5,036,978*l.* in the corresponding period of 1867, and 4,733,055*l.* in the corresponding period of 1866.

COLLIERY EXPLOSIONS, AND THE WEATHER.—The question whether rapid changes in atmospheric conditions have any influence upon the ventilation of collieries, seems less likely than ever to be satisfactorily answered. From the plausibility of the theories propounded, practical men were at first inclined to place some confidence in barometrical indications, and barometers and other instruments which have been recommended are now to be found at the majority of mines, the officers of which carefully watch the indications, and act accordingly. The number of those, however, who doubt the reliability of the warnings is gradually increasing, so that it may be anticipated that an interesting discussion between the barometricians and the colliery managers will arise. Mr. T. L. PLANT, F.M.S., enquires (in reply to the statement made by the manager of the Ince Hall Colliery, at the adjourned inquest into the Hindley Green colliery explosion, that extraordinary atmospheric conditions have no influence in the ventilation of our coal mines), how it is to be accounted for that almost all the most terrific accidents of this character have been preceded by great oscillations of atmospheric pressure and temperature, and precisely similar to those important changes which took place immediately before the Arley Mine catastrophe? Again, there is the fact that all the great calamities of this description have occurred in the winter months, when the natural facilities for ventilation are constantly changing; and, therefore, when so much greater precautions are required for the safety of the men employed in such dangerous occupations. What I would urge for the prevention of these deplorable accidents are—1. That indiscriminate blasting or firing should be suspended in the winter months.—2. That greater and more effectual control should be held over the men in every pit by competent overlookers, and especially as regards the use of their lamps, in order to prevent their tampering with the same.—3. That more discrimination should be exercised in the engagement of men, as through the folly of one man's act the lives of hundreds have been sacrificed.—4. That greater importance should henceforth be attached to a low reading of the barometer following immediately after a very high pressure; but more particularly to great changes of atmospheric pressure and temperature succeeding each other in rapid and alternate fluctuations. At the last meeting of the Manchester Literary and Philosophical Society, Mr. BINNEY, the Chairman, said all explosions of fire-damp are caused by there being too much light carburetted hydrogen and too little air in the mine at the time. Mr. BINNEY is undoubtedly correct in stating this. It came out in the evidence at the late Arley Mine inquest, that, in face of diminished atmospheric pressure during the week preceding the explosion, the quantity of air passing through the workings was not increased.

BLAKE'S STONE BREAKER.—The use of this excellent machine in connection with the preparation of ores for market continually increases, the captains of the mines at which it has been introduced expressing in all cases the most favourable opinions with regard to it. The fact that it will break down no less than 120 tons of pyrites per day of 10 hours is a sufficient evidence of its power to get through work, and this, considering that the cost per ton for crushing is but a very small fraction of 1d. per ton. Perhaps there is no greater recommendation of the machine than the facility with which it can be made to turn out work of uniform size, although any size stone, up to 20 in. by 9 in., can be indiscriminately fed into it. The efficiency and economy of the machine are so great that no mine can be considered well furnished with necessaries where it is not employed.

THE DIAMOND DRILL, AND NITRO-GLYCERINE.—The great commercial value of nitro-glycerine as a blasting agent is about to be thoroughly demonstrated at the East River entrance to New York Harbour. Mr. Sidney F. Shelbourne, of New York, has contracted for the removal of an obstruction, and has expressed the intention to employ nitro-glycerine exclusively for the work; the diamond drill being the instrument chosen for making the holes to receive the charges. The machine to be employed consists of a cast-iron casing, 7 feet in diameter, and in the form of a shallow inverted bowl, which is made to grip the rock by means of solid steel feet. This supports a conical wrough-iron frame, which supports the drill shaft. The drill bar has a bit, 1¾ in. in diameter, carrying 19 diamonds, and rotating from 300 to 500 times per minute. The rock operated upon is a softish granite, and the progress made is about 7 ft. per hour. The feed is regulated by a differential gearing, and the debris is washed away by the water forced into contact with the bit through a small rubber hose. The water-tight chamber of the machine contains a pair of engines, working at right angles to each other, with a horizontal stroke. The drill, with its attachments, weighs nearly 5 tons, and would be worked from a wrecking tug with a derrick, by means of steam supplied from the boiler of the tug. A most ingenious arrangement has been introduced for preventing the condensation of the steam in its passage through the water to the engine; it is conveyed through a tube contained within another, the exhaust steam passing between them. A given number of holes being drilled, a diver will charge them with nitro-glycerine, and they will be exploded simultaneously by electricity. How is it that nitro-glycerine is not more generally used in England?

THE PROGRESS OF IRON MANUFACTURE IN AMERICA.—Only a few years since the receipt of a letter from the United States written upon sheet-iron, considerably thinner than the finest tissue paper, afforded the iron manufacturers of this country conclusive evidence of the excellent workmanship which could be exhibited in America, and at the same works—those of Messrs. Graff, Byers, and Co., East Birmingham, Pennsylvania—there has been given a very fair sample of speed. Mr. Cramer, the intelligent foreman of the works, and the hands employed, undertook to turn out in a day of eight hours 15 tons of 4¾ hoop-iron, being nearly 40 per cent. more than the largest quantity of work ever previously accomplished. The challenge was accepted, and Mr. Cramer and his friends set to work in good earnest, the re-

sult being that at the end of the eight hours 16¼ tons (English tons of 2240 lbs.) had been made, and of excellent quality. Here is an example which English millmen may well endeavour to imitate.

MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,
Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

Mr. ALEX. M. CLARK, of Chancery-lane, has specified a patent relating to lamps for burning mineral oils and essences (communicated to him from abroad by L. D. Defienne and P. H. Girardin, both of Boulevart Saint Martin, Paris). The apparatus is formed of several tubes of small diameter placed around the inside of a cylinder, the size of which is regulated according to the number of tubes employed. In each of these tubes there is a round wick, the lower part of which can when required be placed in contact with a central wick, which being unravelled and immersed in the oil serves to constantly feed the small wicks by capiliary attraction. These wicks may be raised or lowered simultaneously, and to an equal extent. The oil is supplied to the wicks at the lower part, either by means of a tube perforated with small holes, or by immersing them directly in the supply of the oil or essence. In this lamp, the flame is not enclosed by a cap, as in the ordinary burners, and the air, circulating freely between each tube, prevents the heating of the lamp and liquid, giving great security in burning the latter; the combustion also is complete, and the illuminating power very great.

Mr. JOHN GRANTHAM, of King's Arms-yard, City, civil engineer, has obtained a patent for the construction of iron and steel built ships and of rudders. The ship is formed with an external and an internal frame, but in place of making a vertical external frame as hitherto the external frame is made horizontal, and in place of making the frame of flat iron it is made of angle bars. The flange of the angle bars is usually formed in such a manner as to aid in securing a sheathing of timber, which is applied on the outside of the ship between the horizontal frames. The internal framing of the ship is also of angle bars placed vertically, or it may be partly vertically and partly horizontally. A metal sheathing is applied over the timber.

Amongst recent applications for patents may be mentioned the following:—W. CHALLINER, of Sheffield, stamping forks or spoons of steel, iron, silver, or any other metal.—J. PALMER, of Sutton Coldfield, Warwick, manufacture of steel agricultural and horticultural and other like forks.—S. SMART, of Bromley, steam and other boilers.—J. SNAPE, of Mountain Ash, South Wales, mechanical engineer, pumps or apparatus for drawing and forcing fluids, particularly applicable to the ventilation of mines.—D. S. PRICE, manufacture of iron and steel.—H. ROBINSON, of Lewisham, apparatus for dressing millstones.—ELLIS BUTTERWORTH, of Lancaster, furnaces.—C. D. ABEL, of Chancery-lane, manufacture of wrought metal pipes (communicated to him from Mr. J. B. Clow, of Pennsylvania, U.S.)—J. A. A. LANDA, of Paris, machinery for engraving letters, medallions, and other ornaments on stone or metal.—A. G. CAZALAT, of Paris, manufacture of steel.

ARTIFICIAL FUEL.

Mr. SYDNEY HALL, C.E., of Swansea, has specified his invention, which has for its object improvements in the manufacture of artificial fuel. Artificial fuel is sometimes produced by feeding the fuel composition into a tube or passage, in which a reciprocating plunger works. Each time that the plunger retires the space which it leaves empty is filled with composition, which is consolidated by the plunger when it next advances, the resistance which the material offers to being driven forward through the tube or passage being sufficient to cause the required consolidation. Each advance of the plunger also pushes a given length of the consolidated material out of the open end of the tube or passage, and the fuel is in this way discharged from the machine in a moulded form. When artificial fuel is made in this way, however, there is difficulty in dividing it up into separate blocks of uniform size. This, according to Mr. Hall's invention, is accomplished by covering the face of the plunger with numerous thicknesses or sheets of paper, thin plates of metal, or it may be of other suitable material, so that at each stroke of the plunger the sheet or plate which is in contact with the material may adhere to it, and be left behind when the plunger returns; the sheet or plate so left then forms a separation between the already-moulded material and the next charge which is introduced into the moulding tube or passage. Mr. Hall prefers to operate as follows:—He secures to the face of the plunger a metal plate, having projecting studs upon it; the sheets of paper, thin sheets of metal, or other material, are carefully perforated to correspond with these studs, and a number of sheets or plates are placed on the studs one over the other to the thickness which the projection of the studs will admit.

Messrs. HENRY D. HOSKOLD, mining engineer, of Cinderford, JOHN DAVIS, mining engineer, of Saint White's, and GEO. P. WHEELER, engineer, of Abinghall, Gloucester, state that the object of their invention is to manufacture from small coal or coal dust a cheap and highly concentrated fuel, which when burnt will produce little smoke. The invention consists in mixing with the small coal or coal dust clay or silicate of alumina, sulphuric acid, and carbonaceous or other cementing or binding matters. This mixture is formed into blocks, and when dried is ready for use as fuel; owing to its coking power, and to the ingredients which bind it together, this fuel will sustain combustion for a longer time, and give a greater degree of heat, than any fuel heretofore made from coal dust. Messrs. Hoskold, Davis, and Wheeler do not limit themselves to any particular proportions of the ingredients before named, but the following are what they consider good proportions:—17½ cwts. of small coal or coal dust; 2¼ cwts. of clay or silicate of alumina; 28 lbs. of resin, or other cementing matter; 4 lbs. of sulphuric acid, or vitriol. The resin may be either made into size dissolved by boiling in soda-ash or alkali, or it may be used dry in the state of powder. The mode in which they manufacture the fuel is as follows:—The clay is dried and sifted, or otherwise formed by suitable machinery into particles of about equal size to the coal dust, and then mixed therewith; the resin size, well diluted with water, is then added, or, if the resin is used dry, it is mixed with the coal dust, and the water is added separately; lastly, the sulphuric acid or vitriol is added. The whole, when well mixed together, forms a compact, ductile mass, ready to be moulded, under pressure or otherwise, into a firm block or blocks; when dried at about 300° Fahr. it becomes a solid hard block, which will resist the action of water, and will not break in removal or conveyance.

METHOD OF IMPROVING POOR COAL.—It is stated that a Swiss professor of mineralogy has discovered a means of communicating to the fossil coal which abounds in the valley of the Alps all the qualities of the best fossil English coal. The process employed consists of an inexpensive chemical preparation by which the coal of the Alps is mixed with naptha and bitumen, obtained in large quantities from the Apennines. Should the expectations formed be realised Italy would no longer require to import coal. It is stated that the plan is already in use in France.

IMPROVEMENTS IN STEAM-VALVES.—A new self-adjusting plug-cock or valve is at present being introduced by Messrs. TILLY and THOMAS, Circus-place, Finsbury, which it is claimed is superior to those at present in use, both for economy and efficiency. By the employment of an outer shell, forming a heated chamber round the working shell of the valve, expansion and contraction are equalised; whilst by the use of two inlets and two outlets, the travel of the plug is reduced to one-half, thereby diminishing the friction and the wear and tear. The plug is kept it its position by a spiral spring packing in the centre of the cover enclosing the loose spindle. It is claimed that in first cost these valves are cheaper than any others in use, will last double the time, and will not get out of order. The valve is likely to come into very general use.

USEFUL ALLOYS.—The analysis of a few alloys in use in Paris for spoons and forks, and said to be unusually good in appearance, has been made by a German chemist. The first, a beautiful yellow alloy, is really aluminum bronze, and is composed of 89·3 parts of copper and 10·5 parts of aluminum. The second is also a gold-resembling alloy, and has been named "oreide." This is composed of 79·7 part of copper, 13·05 parts of zinc, 6·09 parts of nickel, with 0·28 parts of iron, and 0·09 parts of tin. The two last named are no doubt accidental ingredients. The third is a beautiful white metal, very hard, and taking a beautiful polish. It is composed of 69·8 parts of copper, 19·8 parts nickel, 5·5 of zinc and 4·7 of cadmium.

THE COLONY OF VICTORIA, AUSTRALIA—ITS METALLIC WEALTH.

BY THOMAS CARPENTER, M.E.

The progress of this country is altogether without parallel. Thirty-five years ago it was a barren waste; in 1835 it was reached by a few persons, one of whom is now living, and who may be justly called the "Father of the Colony"—the Hon. J. P. Fawkner. Its rapid development may be dated from the discovery of gold which took place in 1851, when its population amounted to some 86,825 people; its imports to 1,056,437*l.*; and its exports to 1,422,909*l.* The amount of gold obtained in this year was 145,137 ozs. Ten years after the population reached 540,322 persons, an increase of 453,497. Its imports were 13,532,542*l.*, an increase of 12,476,105*l.* The exports were 13,826,606*l.*, showing a difference of 12,403,697*l.* The gold produced was 1,967,413 ozs., an increase of 1,822,276 ozs. The largest amount of gold obtained in any one year was in 1856, when it reached 2,985,695 ounces. The population of Victoria to-day numbers some 666,000; and the colony has produced 160,000,000*l.* worth of gold. The colony of Victoria forms a very small portion of the great Australian continent, its area amounting to about that of Great Britain; its population is little more than one-sixth part of the metropolis of the mother country. Twenty years ago Melbourne, the metropolis, was little more than a sheep walk. Now it is a beautiful city, possessing and enjoying all the blessings and comforts of the highest state of civilisation, inhabited by some 200,000 persons, and communicating with the main centres of population by two of the finest lines of railway extant. The Parliament has just passed a bill to construct some 200 miles more, and ere long the gold fields of Castlemaine and Sandhurst will be supplied by a stream of water from a distance of 60 miles. Not only are all the principal parts of the colony connected with the electric wire, but the adjacent colonies, the entire length of which now exceeds 3000 miles. The country has cost England *nil*, but has given her so much treasure, not forgetting in the hour of trial when she needed it—the Crimean war; and has been such a good customer to her manufacturers and labourers of all classes and descriptions—the ironmaster, the engineer, the founder, the shipbuilder, &c.

Raising this immense quantity of metallic worth is not all. In doing so we have discovered that mining is still in its earliest state of infancy, and that we possess a vast metallic domain, the area of which is little short of 900 square miles. This great auriferous region is traversed by some 2300 metallic-bearing quartz lodes and veins. It is in discovering these, and the mere scratching of their backs, that we have obtained so much wealth, and chiefly with appliances, if compared with those in use in European mines, primitive in the extreme. What would be said by those experienced in the art of mining if they saw some hundreds of small shafts, or pits, sunk to a depth of several hundred feet on the line or course of a tin or copper lode, where some dozen would suffice, providing they were similar to those constructed the same as those are, for the development of England's mineral and metallic wealth. Nor is this all; the stuff is raised by means of the mere hand and horse windlass, chiefly the former. What more is required to show the great richness of the metallic deposits than the obtaining of such great wealth with such a system as this—a system like that in use by the miners of Cornwall, who raised tin from the diluvium of that county years before the birth of Christ, and in working this diluvium those lodes and veins were found which have been worked for so many centuries past, and with so much profit. Merely to illustrate the laws of the Great Creator, and their universality, I can here assert, and that with every truthfulness, that the auriferous deposits of Australia, whether they be found in the diluvium, or in veins, or lodes, are in every way analogous to the staniferous drifts and lodes of Cornwall, only that they are far richer and more extensive. Here, then, practice has again asserted her superiority over her too frequent antagonist, theory. A Royal Commission, appointed by the Government of Victoria in 1856, to enquire into the permanent wealth of the gold fields, *reported that it would be a waste of money to put up permanent machinery to mine for gold.* They considered themselves disciples of Sir R. Murchison, and said that gold would not be found in depth in paying quantities. Since the publication of that report (its contents I combated at the time) in 1857, machinery of a permanent character, to the value of 2,300,000*l.* sterling, has been erected. Crown lands by the thousands of acres were disposed of at 1*l.* and 2*l.* per acre that have since been re-purchased for mining purposes at a cost of hundreds of pounds per acre. So much, then, for the value of the official knowledge of geology, or its representatives in Victoria. Its professor-theorists advised the miner to throw down his tools in despair, sacrifice his means, his hard labour, lose his all, thereby to damn the country's great source of wealth, and allow all those millions that have since been obtained to remain dormant. Fortunnately, to the *bona fide* miner practice said, "Go on; enough has been done to convince me that gold lodes are like those of tin and copper," and history has recorded how long they have been wrought, and with what results.

Time has shown, brief as it has been, whether theory or practice was right. If the Government geologist and professor, McCoy's, dicta had been adhered to, we should have no Port Phillip and Clunes Gold Mining Companies to-day. Permanent machinery with them, and such as they have (the finest reduction works at present extant), has solved the problem in the most satisfactory manner, paying off a large debt, and now giving a regular and good per centage on the paid-up capital, and promises, with every prospect under the present good management, to considerably improve. If the quartz resources of Victoria were worked, and in a similar manner, her yield of gold would be increased tenfold. Here, then, is a field for the investment of capital in mining—some 900 square miles of auriferous country, traversed by some 2300 quartz lodes and veins, and mined by some 70,000 miners (20,000 of which are employed in quartz mining), aided by machinery worked by horse-power, amounting in the aggregate to 19,000 horses, raising, in the year 1866, 861,468 tons of quartz, which yielded 459,895 ozs., or 10 dwts. 6 grs. per ton.

The principal machinery in use is the stamps, which number some 5500 heads. There is no dressing processes in use worth mentioning; much is left to chance, hence a large loss of gold. No more is known of the principle of amalgamation than at the time when Pliny wrote. It is impossible for a finer mining field for the investment of capital to be found; it is merely a question of systematic development to ensure large returns for outlay, comparatively small to that generally required in opening up permanent mines. No years of searching, neither sinking and driving through rocks of adamantine hardness, nor powerful and heavy pumping or drainage machinery; and if the wages of the miner in Australia is greater, he performs twice as much labour; the fine climate, and the best of food in ample quantity, admits of his doing so. These statements are founded on fact, and on the observations made on the gold fields of Victoria, extending over a period of some sixteen years, and which have been guided by an extensive experience obtained in the largest of our English mines.

[*To be continued in next week's Journal.*]

HOURLY COMMERCIAL CORRESPONDENCE WITH PARIS.—Although much importance is attached to the construction of Boutet's Anglo-French Railway Bridge, from the immense facilities it will afford for the transport of passengers and merchandise between England and the Continent, it seems that there is another purpose to which the bridge can be turned, which will confer even greater benefits, commercially speaking, upon the two countries. A friend of Mr. Boutet suggests that a light steel tube, a metre in diameter, might be affixed to each side of the bridge, either outside, or forming part of, the balustrade. These tubes could be continued along the existing lines of railway (or a single tube would suffice, except on the bridge), and might be used for the conveyance, by atmospheric pressure, of letters, &c., in a specially constructed carriage which the inventor has designed. The tubes would add comparatively nothing to the cost of the bridge, and would add materially to its rigidity. By this means a letter posted in London, if addressed to the Place de la Bourse, could be delivered almost as quickly as if addressed to a suburb of London, and there would be nothing to prevent the establishment of ten deliveries daily of Paris letters in London, and of an equal number of deliveries of London letters in Paris.

REPORT FROM SCOTLAND.

JAN. 5.—Our Pig-Iron market is in strong hands, the strings being pulled by parties in London and Liverpool, who are speculating for a rise, which they are likely to realise, judging from the enquiries here, as well as from the course trade is pursuing in the South. The closing quotations of the year are exceeded by those now current; and if it turns out to be correct—as some of the "bulls" here are reporting—that stocks are exceptionally low in the competing districts in the North of England, and prices are advancing, speculators may raise the price of pig-iron in this market very considerably. The same parties are circulating that the stock of first-class brands and g.m.b. in the hands of Scotch makers is comparatively insignificant, and, with the Carron stock—which is held off the market—affords an opportunity for advancing present prices. There is no doubt that we are experiencing a scarcity of choice brands and g.m.b., but not to such extent as to warrant anything more than a moderate advance. The shipments of the week—which has almost been an entire holiday—were 4345 tons, against 7100 tons in the corresponding week of 1868; and the imports from Middlesborough in the same period were 910 tons, against 831 tons, being an increase on the week of 79 tons. This year the market opened firm, and 54s. 3d. to 54s. 6d., cash, was accepted for a few thousand tons. To-day, in an improved market, a further advance of 3d. a ton took place, and over 5000 tons were sold; closing buyers, 54s. 9d. cash, 54s. 11d. a month; sellers 1d. more. No. 1, g.m.b., 55s.; No. 3, 52s. 6d.; Gartsherrie, 61s.; Coltness, 60s. 6d.; Langloan, 55s.; Glengarnock, 55s. 6d.; Calder, 58s.; Eglington, No. 1, 54s. 3d.

Bar-iron makers are fairly off for orders for the commencement of the year, but they would have liked to have started with an advance, which they have not yet been able to obtain. Govan, Glasgow, Blochairn, and North British works quote 7*l.* per ton; Mossend, Muirkirk, and Monkland, 6*l.* 15s.; Rochsolloch, Coatbridge, and the others, 6*l.* 12s. 6d. per ton. The shipbuilding trade on the Clyde is in a very flourishing condition, and makers of plates are so full of orders that they refuse to quote at all at present; indeed we hear of three makers who absolutely refused a few hundred tons at 5s. advance. The return of vessels contracted for on the Clyde are known to be incomplete; and one firm (recently employing fully 2000 hands) have purchased lands a little further down the river, for the purpose of erecting more commodious and eligible shipbuilding premises. To show the expanding character of this branch of industry, while about 43,000 tons were built on the Mersey in 1868, 178,624 tons were built on the Clyde, classified thus:—

Description.	No.	Tons.
Iron steamers	86	87,689
Iron sailing ships	63	67,746
Composite steamers	10	5,590
Composite sailing ships	19	15,121
Wood ships	19	2,475
Total	197	178,624

This extension in our shipbuilding greatly increases the local consumption of manufactured iron; and the favour with which the Clyde-built vessels are being everywhere received will further develope this branch of the iron trade. Castings and pipes are also in more demand. We learn that to-day a large contract has been taken by Messrs. Edington and Sons and D. Y. Stewart, for 20,000 tons of pipes, various sizes, for South America. The delivery is to extend over 12 months. Price not transpired.

Coals are weaker with the opening of the year, and the best qualities have been slightly reduced for domestic use. Shipping quotations are unaltered, and the demand is sluggish. The shipments are large for the week, being 24,318 tons, against 15,910 tons in the same week of last year. Two valuable seams of coal have been found on Lawhead, Upper Ward of Lanarkshire; and the Mid-Calder branch of railway having been opened on the 1st inst., will be of great service to the mineral district through which it runs, and will be the means of linking it with the direct route between Edinburgh and Glasgow. The miners are quiet, but are dissatisfied at the variety of prices paid in the various mining districts. Instead of taking an average, and making that the standard of assimilation, as the produce of all the works nearly enter a common market, they have resolved to "level up" to the highest standard, but it is to be feared that a "leveling down" is inevitable.

The launches since last week were the Magellan, an iron screw steam-ship of 3000 tons, builders' measurement, and 600-horse power, built to the order of the Pacific Steam Navigation Company, and intended for their direct mail line between Liverpool and Valparaiso; there are on the stocks, for the same service, the Patagonia, Andes, and Cordillera, of the same tonnage and power as the Magellan. Also, a splendid iron clipper ship, named Lake Superior, the property of a Canadian shipping company, of the following dimensions:—Length, 220 ft.; beam, 36 ft.; and 24 ft. depth of hold. The following is the description, number, and tonnage of vessels contracted for or in course of construction by Clyde shipbuilders, as far as can be ascertained on reliable authority, with the exception of eight, whose orders would greatly enhance the total:

Description.	No.	Tons.
Screw armour clads	3	10,188
Paddle steamers	3	1,914
Screw steamers	57	70,600
Sailing vessels, iron	38	37,300
ditto composite	9	7,400
ditto wood	11	1,858
Barges, iron	2	140
Total	123	129,400

The engines of the above will exceed 14,000-horse power.

REPORT FROM NORTHUMBERLAND AND DURHAM.

JANUARY 6.—The state of the Coal Trade at the commencement of another year is, it must be confessed, far from being satisfactory; this view, however, refers more particularly to the steam-coal trade. The iron and general shipbuilding, and other branches, are improving considerably, while the general prospect for trade is decidedly better on the whole. The demand for fire-bricks, which has been very dull during the past year, has considerably improved, and as the iron trade improves the demand for coke also increases. The demand for coke, gas, and house coal continues moderate. The bulk of the collieries in Durham are moderately employed, few being wholly engaged at full time, and considerable quantities of coal are yet to be met with at some works. The steam coal trade in Northumberland continues very dull, with few exceptions. Short time is too much the rule, and full work the exception. At Seaton Delavel Colliery full work has been going on some time, indeed there is some difficulty in putting out the required quantity to supply the engagements entered into, but at most of the works in that district extreme dulness prevails, and at some privation has been endured by the men to such an extent as has not been heard of for many years. It is, however, hoped that as the general appearance of trade is so much better, and as the Spring trade opens, which may be expected shortly, this gloomy state of things will give place to better prospects.

There was a large attendance at the Middlesborough iron market on Tuesday. The tone of the market generally was active. In the pig-iron trade there are hopeful prospects, and manufacturers seem unwilling to sell out at the present rates, which remain at 48s. for No. 1, 45s. for No. 3, 44s. for No. 4, net cash, f.o.b. on the Tees, &c. Foundries and engine works are fully employed, and the demand in some cases is beyond the power of supply. In bars and plates a considerable business appears to be transacted, and the same remark holds good with respect to angle and shipbuilding iron. The yards on the Tees are better employed than they have been for many months past, and prospects are more hopeful. Rail-makers report a considerable increase in enquiries for rails, especially from the Continent. The present state of the blast-furnaces in the North of England is as follows:—In 85, out 55—total 140. Stocks are decreasing. It is expected that the conference which has been arranged between the Middlesborough Chamber of Commerce and a deputation of the Tees Conservancy Commissioners will result in a reduction of the dues on vessels imposed by the latter body, and a consequent improvement in the trade of the river.

The Quarterly Meeting of the North of England Iron Trade takes place at Middlesborough on Tuesday next.

The establishment of district schools for the purpose of scientific,

or as it is generally termed, technical education in the district, continues to attract much attention, and already many schools have been established, and others are to be shortly commenced. Schools have been commenced at Blyth, Elswick, North Hetton, and Monkwearmouth; and others will shortly be commenced at Blaydon, Seaham, Seaton Deleval, and Ryhope.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

JAN. 7.—There is usually little to say about the state of trade in the week intervening between the Preliminary Meeting and the Quarterly Meetings, which will take place next week. The immediate prospects of the trade are neither better nor worse, but the probabilities as to the present year are favourable. Mr. Samuel Griffiths, in an annual review of the iron trade, sums up the grounds for favourable anticipation very correctly. He anticipates a considerable demand for iron, especially for railways for the United States and Russia, and a revived demand for India and Australia, and states that the Belgian and French ironworks have, or will have, sufficient to do for their own or other countries not to be serious competitors. He also justly urges that the effects of the collapse of 1866 are passing away, and with the prospect of a good harvest here and in France thinks an advance in price probable by May or June. As to this, it may be remarked that there is now less confidence than there was six weeks or two months ago that the increase in the demand will lead to an advance of price in the spring. At present the trade must be described as rather quiet, and a good many works are only partially in operation.

A case which illustrates the defects of a good deal of our legislation came before the Court of Quarter Sessions of this county yesterday, and, as it bears upon a great number of joint-stock companies, is worthy of notice. The Wolverhampton Gas Company is restricted by their Act of Parliament to a dividend of 10 per cent., which has long been paid. The price of gas has been reduced many times, and is now low compared with the price in many towns. It was, however, alleged by some members of the Wolverhampton Corporation that the receipts were in excess of what was required to pay 10 per cent. upon the capital, and, under a power given, an application was made to the sessions to appoint an accountant to report on the point. The parties were urged to try to agree, but did not, and at last the Court of Quarter Sessions appointed a Mr. Carter, of Birmingham, who audits the county accounts, and he set to work. Great astonishment was expressed in the Wolverhampton Town Council on finding that he was pursuing a most minute investigation for 20 years back into all the items of consumption and payment, and his report is a most elaborate document—a frightful mass of figures, but the results set forth with ability, and his opinion seems to lean to the view that the company, amongst other things, has spent much more than they need in permanent works, the suggestion evidently being that they desire to increase the amount of capital on which they can pay 10 per cent. for the purpose of obtaining that dividend. The bill for this report was upwards of 700*l*. The result of all this was that the Court did not feel justified in making an order for the reduction of the price of the gas, and the company have to pay the bill of the accountant, which, however, was reduced to 500*l*., besides their own heavy costs. This is one of many cases where the Legislature fails to work out its aims, and crowds the statute-book with prohibitions and requirements which there are no easy, hardly any, means whatever of enforcing. The union of private enterprise, with restrictions for the public advantage, is no doubt difficult, but it is by no means impossible, and perhaps a real check on capital expenditure, a practical provision for valuation, with estimate of depreciation, and a power to the local public body to buy at a maximum premium, would have been more effectual than the present limit of dividend. At any rate, the inhabitants have, by throwing this 500*l*. with their own legal expenses on the company, interposed a strong obstacle to the reduction of the price of gas, which was the object desired.

An enquiry took place before the coroner on Monday, at West Bromwich, at which Mr. Baker, the Government Inspector of Mines, was present, as to the death of Thomas Thorns, 26 years of age, by a fall of coal in a thick coal mine, belonging to Mr. John Spittle. It appeared that the pit had been examined by the doggy, but it did not appear whether this particular place was, and Mr. Baker said that overhanging coal should be the object of special caution. The jury returned a verdict of "Accidental Death."

At the Bilston Police Court, Mr. J. Burrows, of the Barnfield Colliery, near Bilston, was charged with neglecting to frame special rules for his colliery, and submit them to the Home Secretary. Mr. Thomas Walker appeared for the prosecution, and the Government Inspector (Mr. J. P. Baker) was also present. The defendant pleaded guilty. Mr. Walker said they did not press for a heavy penalty, but they wanted a conviction, to show colliery owners that, however small their colliery might be, the law required that special rules should be drawn up and submitted for approval to the Home Secretary. Such rules were the only safeguard for the collier's life.—Mr. Perry said that a strict attention to the law in all mining matters was quite necessary, and the case had been brought before him, not out of any ill-will, but for the purpose of a public example. He should, therefore, fine the defendant 1s. and costs, in all (including the advocate's fee) 33s. 6d.

NORTH STAFFORDSHIRE COAL AND IRONMASTERS' ASSOCIATION. The quarterly meeting of this association was held at the North Staffordshire Hotel, Stoke-upon-Trent, on Thursday, Mr. F. Wragge, Chairman, presiding. The state of the iron trade of the district was fully considered, and it was decided, with entire unanimity, and without the slightest hesitation, that there was nothing in the condition of affairs to warrant an advance either in prices or wages. The operation of the Factory Acts, as applied to the iron trade, was discussed at some length, and the meeting appeared to be generally of opinion that the law, as at present applied, has the effect of imposing upon the manufacturers useless and vexatious restrictions, and of inflicting great injustice upon the families of lads now rendered ineligible for employment in iron works. It was ultimately decided to endeavour to obtain modifications of the law, and the secretary was requested to inform other associations of this determination of the Ironmasters of North Staffordshire.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

JAN. 7.—There is very little alteration in either the Coal or Iron Trades of Derbyshire since the new year; but, taken altogether, the prospects are decidedly healthier than they have been. During the greater part of last year, the demand for manufactured iron was very moderate, and at many of the largest establishments in the county the workmen were only partially employed, in some instances the puddlers being only able to make two and three turns a week. Pipes and general castings, and other qualities of merchant iron, are now in better demand, and although in few places there is nothing like activity still there is more doing, and a better feeling as to the future. The number of furnaces now in blast is at least as large as for many months past, so that the output of pig-iron is now tolerably large. In coal we have a rather moderate business, the weather, although changeable, not having become really cold, the little snow which fell during the latter part of last week having disappeared almost as soon as it fell. There is, however, a very fair tonnage being forwarded from Clay Cross to the Metropolis, as well as from several other of the principal collieries in the district. Gas qualities are in fair request for Birmingham and Western Counties, but there is not so much doing with Hull and Grimsby in steam coal.

The new year has opened rather favourably with regard to several of the most important branches of the Sheffield trades, and the prospects are far more encouraging than they have been for months past. Heavy armour-plates appear to be rather brisk, and this important branch, which has its centre in Sheffield, promises to be still more active as the year advances. Heavy steel goods are also showing signs of increased vitality, and, as a rule, the workmen at many of the leading establishments are more fully employed. In the neighbourhood of Rotherham the large works are favourably off for orders for most descriptions of merchant iron, and the same is the case at Milton and Elsecar, where the various mills are in full operation, with every prospect of its continuing so for some time. Most of the furnaces in the South Yorkshire district continue in blast, so that there is a large output of pig, in addition to what is imported from Lincolnshire, and which is better adapted for forge purposes than for casting. In Coal there is not much more doing than has been indicated for some weeks past, coalowners still being unable to compete with other districts, owing to the carriage rate to the Metropolis being such as to nearly keep them out of that important market. There is a fair business for the season being done in steam coal to Grimsby for France and some few of the Northern ports, but there is no change for the better in the trade with Hull. From Goole the tonnage for shipment is of about an average character, a good deal of what is sent being for the ports on the East Coast. There is no improvement with regard to the quantity of engine fuel and other coal going into Lancashire, and no alteration is expected for the better, seeing that a great many of the mills are now working short time. The demand for coke continues good, and in several instances makers have had the offer of contracts in excess of their ability to supply.

Amongst the changes which have taken place during the new year, it may be stated that Mr. Clayton, of Barnsley, who has had the management of the Silkstone patent coke-ovens, and long been connected with the Frodingham Collieries, retires, having become a partner in the Waterloo Forge Company, Hunslet, Leeds, where a good deal of work in connection with collieries is done.

The inquest on the Norley Hall Colliery explosion has now concluded, with the exception of Mr. Higson's report, which will be presented in three weeks. Nothing elicited in the evidence appears to throw much light upon the subject. No doubt seems to be entertained that the explosion occurred in the place where Cheetham (the fireman) and Sharrock were cutting a step, but as both of these are dead little more can be ascertained. From the appearance of the place the shot seems to have gone off prematurely. The air was not at all slack on the morning of the explosion. Josiah Barton gave evidence as to the state of the mine on the Saturday; he perceived no gas, and there was plenty of air. Mr. Watkin, of the Pemberton Collieries, had made several examinations of the mine since the explosion, and it was his opinion that the bratticing between Dawber's and Farton's places had been disarranged, and also that in the level above there had been a consequent stoppage of the ventilation, and that an accumulation of gas had resulted, which had fired at Cheetham's shot. Cheetham and Sharrock, he thought, had not finished the preparations for their shot, as their bodies were found so near it. He was satisfied with the system of ventilation, and the only precaution he could suggest was that every care should be taken by the firemen in the discharge of their duty. William Bryham, manager of the Rose Bridge Collieries, concurred generally with the opinions expressed by Mr. Watkin, though he thought it possible there might have been an emission of gas from a fall of roof, and that this had been carried into Cheetham's place. William Hepple Harbottle, of the Waltham House Collieries, had no doubt that the fireman (Cheetham) intended examining the place before firing the shot, but had been prevented by a premature ignition of the charge he was preparing.

The colliery proprietors of South Yorkshire having resolved, considering the present state of the coal trade, to decline to concede the 5 per cent. advance, the colliers have reconsidered the subject, and in a very admirable spirit decided to withdraw the demand. To prevent all possible misunderstanding the miners have forwarded (through their secretaries, Messrs. Normansell and Casey) a copy of the resolution, which displays excellent judgment, to each proprietor. They accept the explanation of the masters as well grounded, and have resolved "not in any way to alter their course of working either by 'restriction' or a 'strike,' as agitated in some quarters, but wait patiently with the present state of affairs until a general revival of trade takes place, when the council have every reason to believe the colliery owners will return the 5 per cent. in the same spirit in which it was conceded by the men in May last." In this they certainly will not be disappointed.

THE CARRIAGE RATE OF COAL BY RAILWAY TO LONDON.—A large and highly influential deputation of the colliery owners of South Yorkshire met the directors of the Great Northern Railway Company at the offices at King's Cross, on Tuesday, for the purpose of drawing attention to the present rates for coal going to London. A memorial was drawn up, and presented to the directors in the first instance, showing that the diminution of the consignments to the Metropolis by the Great Northern, and which seriously affected the revenue of the company, and did great injury to the colliery proprietors, was owing to the high rate of carriage, which prevented the latter from competing with other coal-producing counties, and so diverting the trade from the South Yorkshire district. The memorial also urged the important fact that whilst the consumption of coal in London had very largely increased the quantity sent from the district had very seriously diminished, and concluded by trusting that the railway company would at once take the matter into its serious consideration, with the view of remedying a state of things which if longer carried out would, in all probability, have the effect of destroying the trade altogether. The deputation was very kindly received by the board of directors, and the subject was introduced by Mr. Chambers, the Chairman of the South Yorkshire Coalowners' Association, in a forcible manner, in which he pointed out the serious loss the present system was to the company. Mr. R. Baxter, of London, in an able address, enforced the views of Mr. Chambers, pointing out the advantages to be obtained from a modified rate from the increased traffic which would be the result. After some further remarks from other gentlemen, the Chairman assured the deputation that the subject should receive their best attention. It was also stated that the directors would see the Midland board with regard to the matter which had been so ably brought under their notice. The deputation then retired, after expressing thanks for the courteous manner in which its members had been received. It is believed that before long the rate to London, which has hitherto been all but prohibitive, so far as regards the South Yorkshire coal, will be considerably lessened, and that the Manchester, Sheffield, and Lincolnshire Railway Company, which has also been memorialised will lower its rate from the Barnsley district to Doncaster.

REPORT FROM MONMOUTH AND SOUTH WALES.

JAN. 7.—The Iron Trade of this district is in a much more satisfactory position than it was 12 months ago, and there is now a fair probability of its speedily attaining the position makers are so desirous of again witnessing. At the present time there are several good contracts in the market; and in addition to the 45,000 tons Austrian, 18,000 tons Italian, 5000 tons Dutch, 20,000 tons North-Western, 5000 tons Great Eastern, 5000 tons Great Northern, 1500 tons East Indian, Ribinsk, and other large Russian, American, Indian, and colonial requirements, lately under negociation, or expected to fall to Welsh rolling-mills, there are numerous enquiries for large quantities of light rails in the market, and several of the home railway companies are spoken of as likely to be in the market in the early part of the present year. The principal orders now being worked off are chiefly for the foreign markets, and it is probable that the present week will witness the shipment of the whole of the rails now ready for Mollendo. There are, however, several good orders remaining on makers' books, and it is confidently expected that for some to come a fair trade will be done with the south-west coast of America, as the opening up of the railway system has just commenced in that country. There is a steady increase in enquiries from South America, and large quantities of rails are about to be sent to Callao, San Francisco, and Valparaiso. The increased demand from the United States has caused a rise in shipping rates to New York of from 1s. 6d. to 2s. per ton, and several vessels are now wanted at the local ports to convey rails to that and several other ports in the States. There are a few orders being executed for the continental markets, but the unsatisfactory state of affairs existing between Turkey and Greece will, it is believed, delay the speculative feeling which was anticipated to spring up in the early part of the year. There is a moderate demand for common bars, chiefly for the continental markets. Tin-plate makers are well placed for orders, and although the rise in the price of tin diminishes manufacturers' profit, the specifications given out for the American markets will, it is expected, cause a rise of from 1s. to 2s. per box.

The Steam Coal Trade has not materially altered its position during the past week, owing to the continuation of heavy gales, and the inability of vessels to arrive at or leave the local ports. During the early part of the year just ended the trade attained something like a satisfactory position, and the exports were something considerable, but the adverse winds, and the want of suitable tonnage for the latter months of the year, brought the amount of business about equal with that of 1867 and 1866. Merchants and shippers have several orders on their books for the mail packet stations and foreign markets, large purchases being made by France at the present time. Rates to some of the Mediterranean and Turkish ports continue firm, owing to the unsettled state of affairs in the East. There is little activity witnessed in the house coal trade, but an improvement is shortly anticipated, a large number of coasting vessels being expected to arrive at the local ports.

The Ebbw Vale Steel, Iron, and Coal Company (Limited) announce an interim dividend of 7s. 6d. per share for the past six months, making, with the 5s. per share paid in July last, 12s. 6d. per share for the 12 months. The shares, reduced by Act of Parliament to 32*l*. each, have 27*l*. 10s. paid upon them, consequently the dividend for the year is at the rate of about 2¼ per cent. Taking into consideration the long depression in the Iron Trade, and the comparatively low prices which are still obtained, the dividend, although small, is not altogether unsatisfactory, and if there had been no profit made it would not be a matter of much surprise. With anything like prosperity in the trade the shareholders may, no doubt, look forward with confidence to a fair return on the large capital invested in the concern.

CAST STEEL.—"Y.," writing to the *Times*, says—"The name of Krupp, of Essen, has often been honourably mentioned in the *Times* in connection with the important subject of steel, and not long ago one of your correspondents gave an account of a visit to Krupp's works. He saw the casting of a 16-ton ingot of steel, and, I have reason to know, accurately described the process. The metal was melted in crucibles, as in the old and common process of casting steel at Sheffield. The organisation was so perfect that hundreds of crucibles were ready to be taken out of the furnaces at the same time, and the molten contents of each were poured in quick succession into a common receptacle. This done, the metal was immediately let out from that receptacle into the ingot mould. At the International Exhibition of 1862 Krupp exhibited ingots of cast steel so produced, which surprised and delighted every person experienced in the casting of steel. A single ingot weighed upwards of 20 tons, and subsequently, at the International Exhibition in Paris in 1867, an ingot of much greater weight was shown by Krupp. Those ingots were not only large, but sound, and it was this combination of qualities, enormous dimensions, and entire soundness, which made them so remarkable. I have great satisfaction in informing you that similar ingots of cast-steel are now produced in our own Sheffield, and precisely in the same manner as at Essen. I have had ocular demonstration of the fact on the occasion of a recent visit to the well-known steel works of Messrs. Firth and Sons, in that town, in company with several officers of the Royal Artillery. I subjoin an account of what I there witnessed:—The casting-house was rectangular, and along three sides were 108 furnaces, with two smaller in each, the ingot mould being in the middle. Each crucible contained about 50 lbs. of molten steel. At a given signal the pouring of the metal commenced, and in 16 minutes the ingot mould had received the contents of the 212 crucibles. There was no bustle, no chattering, no confusion. The men—200 in number—knew their drill and did their duty without a hitch. The ingot weighed 86 cwts., and was designed for the steel tube of an Armstrong gun. It will be observed that the receptacle employed by Krupp for receiving the steel from the crucibles in the first instance was dispensed with, but that is only a point of minor detail. The Messrs. Firth have cast 9 ton and 16 tons ingots. A 9-ton ingot is required for the 23-ton Armstrong gun. The steel tubes are bored out of solid ingots, and this is one cause of the costliness of our modern ordnance. If larger ingots of steel should be required, they can be made at the same establishment. The enormous ingots of Krupp are to be regarded as *tours de force*, and were specially intended as such. There will be no necessity henceforth to have recourse to foreign steel makers for large shafts or other large articles of crucible cast-steel; and, indeed, if I am correctly informed, the importation of articles of this kind has of late much declined. I may add that, in expectation of orders from the Government, the Messrs. Firth expended about 32,000*l*. in the erection of two 25-ton Nasmyth hammers, reheating furnaces on Siemens' principle, and other appliances. The anvil block of each hammer in cast-iron, cast in one piece, and weighs 164 tons. The length of stroke was 9 feet 6 in. These facts may possibly be of use to the Ministers responsible to Parliament for our great military and naval manufacturing establishments, and prove to them that our steel makers, at least, are prepared to meet all the requirements of the nation. So, doubtless, will all our manufacturers be equally prepared. They have done so in the matter of armour plates, and never did the War-Office and the Admiralty act more wisely than in throwing the manufacture of those plates open to public competition.

PASSENGER CROSSINGS IN CROWDED THOROUGHFARES.—The necessity of providing some improved means to pedestrians for crossing crowded throughfares has been from time to time urged during the past 20 years; yet even in London (the official returns relating to which city inform us that the deaths from accidents in its streets annually equal about two-thirds of the number of deaths from every cause in connection with all the collieries in the kingdom) nothing has yet been done in the matter. For some time it was supposed that bridges would meet the difficulty, but the experience of the Fulton-street Bridge, in New York, has somewhat shakened confidence in that means of communication. A bridge must have 18 ft. clear to admit of the ordinary traffic beneath it, and allowing (say) 4 ft. for the beam and spring of arch, there would be an ascent, and, of course, corresponding descent, to be made 22 ft., which is objectionable, and prevents the bridge being used by the great majority of those for whom it is intended. It is proposed, therefore, to substitute the tunnelling of crossings. A height of 7 ft. 6 in. would be ample for the pedestrian traffic, and in 2 ft. 6 in. ample strength could be obtained to carry the heaviest horse traffic; the necessary descent and ascent could, therefore, be reduced from 22 ft. to 10 ft., and the bottom of the passage could be reached by an easy gradient. The cost would be comparatively trifling, and the traffic would not be interfered with for more than a few days; or the tunnels might even be put in whilst the road was in process of paving.

LITERARY NOTICE.

A Practical Treatise on Metallurgy, adapted from the last German edition of Prof. Kerl's Metallurgy. By WILLIAM CROOKES, F.R.S., and ERNST ROHRIG, Ph. D. 8vo. Vol. I. pp. 724. Longmans, Green, and Co. 1868.

When the immense value of the metallic products of the British empire, far exceeding, as it does, that of any other country in the world, is taken into consideration, it is surprising to observe how extremely little and vague is the information at the disposal of the English public as to all that relates to either the theory or practice of the many metallurgical processes which are employed in eliminating the various metals from the ores which are extracted by the miner from their mother earth; it must be confessed, with a feeling akin to that of shame, that English metallurgists have not, up to the present time, provided us with a single standard treatise on general metallurgy, sufficiently complete to be used as a manual of reference or instruction by those desiring to make this interesting and important science a special study.

This is, doubtless, one reason why our smelters are so frequently found to be what may be called mere rule-of-thumb proficients; too often altogether ignorant of even the fundamental principles of the science on which the success of their operations must necessarily depend, and who might with some reason be likened to cooks who experiment in order to produce savoury messes, by roasting, broiling, melting, or boiling their raw materials, in the hope of some lucky chance bringing about the desired result.

It was hoped, however, that a new era in British metallurgy would be inaugurated on the publication of Dr. Percy's "Treatise on Metallurgy" in 1861, the second volume of which appeared in 1864. We are now in 1869, and as these volumes only comprise the three metals, copper, zinc, and iron, it is almost to be feared that at this rate of progress the author may not live long enough to witness the termination of his treatise; and certainly the first volumes will be far behind the actual state of the science at the time of its completion, if much longer delayed.

The prospects of our speedily possessing any complete treatise on general metallurgy by an English author being somewhat remote, it is naturally very desirable that a translation of some standard continental work on the subject should be in the hands of the student, and it is with considerable satisfaction that we see an attempt to supply this want in the present translation of the last edition of Professor Kerl's "Handbuch der Metallurgische Hüttenkunde."

The first volume of this translation is now before us, forming a handsome thick octavo volume, of between 700 and 800 pages, illustrated by numerous woodcuts of furnaces, apparatus, &c.; the text is somewhat condensed from the original, and contains the metallurgy of the following metals:—Lead, silver, zinc, cadmium, tin, mercury, bismuth, antimony, nickel, arsenic, gold, and platinum, most of which metals are treated of more at length than in any English works on metallurgy hitherto published, and for this reason this volume will, doubtless, be the more appreciated.

In reviewing the substance of this work, it is quite unnecessary to go into details, it being sufficient to remark that it is essentially Professor Kerl's, whose "Hüttenkunde" is universally acknowledged on the Continent to be a standard work of reference of the highest order, occupying at present the position which some 20 years ago the great work of Karsten, the now antiquated "System der Metallurgie" held for so long a period.

This translation is not, however, without its faults, and especially in its style, being somewhat German, still this will, doubtless, be easily overlooked by those who find in the work a great amount of information, previously inaccessible to them; and in conclusion we would express our opinion that the appearance of this volume will do good service to British metallurgy, by supplying a notable deficiency in the literature of that branch of science, and we trust that the second volume, now promised, will shortly make its appearance.

"EXAMPLES OF MODERN STEAM, AIR, AND GAS ENGINES."—The January number—the eight of Mr. Bourne's work—bearing this title, contains diagrams of a steam-winch, constructed at the Motala Iron Works, Sweden, and numerous engravings of the latest models of mill and marine engines. The chapter on mill-engines is a very interesting one, and judging from the commencement of that on marine engines it will be no less so. The examples and the comments upon them are admirably selected, and made with great judgment, so that the book when finished cannot fail to be of great utility to the profession generally.

"THE ANGLO-COLONIAL."—It has often been remarked that the connection between Great Britain and her colonies each year becomes fainter, that since the colonies have had the advantage of self-government conferred upon them they ought to have no claims upon the mother country, and that they should be separated from it as quickly as possible. Now this feeling is not by any means shared in either by the colonists or by those who have dealings with the colonies, and it is not improbable that if information upon colonial affairs had been more readily obtainable the feeling would never had existed. "The Anglo-Colonial" is intended to enable the English reader to acquaint himself with the position, prospects, and requirements of the colonies, at least to the same extent as the colonists are acquainted with the affairs of the mother country: and if the talent and energy displayed in the January number be continued there is no doubt but that it will attain a high reputation amongst our standard literature. Politics, of course, occupy but a subordinate place in a work of this kind, yet where they do crop up the tone is that of sterling conservatism. The close alliance now existing between the Romanists and Dissenters is mentioned with regret, but it is very truly observed that the extraordinary Liberal (?) triumph has resolved itself into a gain of ten Liberal votes. The "Notes on Science" forms an admirable feature in the book; and there are excellent articles on British Earthquakes and Volcanoes, and on the Pitch Lake of Trinidad, which are well worthy of attentive study. The "Colonial Topics," however, is that portion of the work which will ultimately become its great support—whether the reader be connected with India, Australia, Nova Scotia, British Columbia, or other British possessions, he will be sure to find much to interest him. Judging from the present collection, the capitalists of this country may derive much instruction from this section of the magazine. The "Anglo-Colonial" is in every respect worthy of support.

"INVENTORS' ALMANAC."—The eleventh annual edition, that for 1869, of the admirable little sheet almanac (by Mr. Michael Henry, patent agent, of Fleet-street) bearing this title has just been issued. The letter-press is well printed, and the colours are striking. In addition to the ordinary calendar information, the "Inventors' Almanac" supplies the names of the officers of the various scientific and industrial societies, and various statistics and memoranda connected with invention, and the legislation upon it, to which the great advances of modern times may be traced.

QUARTERLY JOURNAL OF SCIENCE.—Amongst the contributors of original articles to the January number of this magazine are several whose names are well known to the readers of the *Mining Journal*—Mr. J. Arthur Phillips, Dr. W. Fairbairn, and Dr. Mann. The articles comprise one on the Ethereal Hypothesis of Light, by Mr. James Samuelson; and others on the Alkaline Lakes of California, by Mr. J. Arthur Phillips; on Experimental Researches on the Mechanical Properties of Steel, by Dr. Wm. Fairbairn; on the Treasures of Siluria; on the Institutions for Practical, Scientific Research by Col. Strange and Dr. Mann; on the Great Solar Eclipse of Aug. 18, 1868, by Mr. W. Crookes; and on the Scientific Year. The Chronicles of Science are of the usual highly interesting character. No pains seem to have been spared to give a faithful account of the newly-ascertained facts which have been discovered

during the three months in a form which shall permit of the record being read with pleasure, and the information given easily retained. The journal thoroughly maintains the high reputation acquired by previous numbers.

ENGINEER'S, ARCHITECT'S, AND CONTRACTOR'S POCKET BOOK.—The edition for the present year of the very valuable pocket-book (long known as Weale's) has just been issued by Messrs. Lockwood and Co., of Stationers' Hall-court, to whom it was assigned by the late Mr. John Weale. The character and utility to professional men of the information given is too well known to need comment—they will find little that is useless to them, yet will seldom consult the pocket-book upon any business question upon which a doubt may arise without finding the information they seek. The lists of the officers and members of the Institution of Civil Engineers, of the Royal Institute of British Architects, &c., are carefully corrected to the latest date, making the book in every way worthy of patronage.

ENGINEER'S AND CONTRACTOR'S OFFICE ALMANAC AND POCKET COMPANION.—This is a neat and compact little volume, which is likely to prove a convenient companion to the engineer. It contains memoranda relating to standing orders, railway construction regulations, mensuration, data and formulæ for wrought-iron girders, steam-engines, railways, cranes, roofs, millgearing, hydraulics' weight of iron, &c. Ruled paper is bound up with the book, which can, therefore, be used as a general memorandum book.

SALES OF COPPER ORES.

COPPER ORES SOLD AT THE CORNWALL TICKETINGS FOR THE QUARTER ENDING DECEMBER, 1868:—

Mines.	Tons.	Amount.
Devon Great Consols	4859	£20,469 16 6
South Caradon	1558	11,995 3 0
Clifford Amalgamated	2489	10,353 11 6
West Wheal Seton	1706	8,556 5 6
Wheal Seton	2015	7,426 8 0
Marke Valley	1414	5,504 18 6
Carn Brea	855	4,306 16 0
Great North Downs	751	3,787 6 0
West Wheal Tolgus	696	2,911 14 6
South Wheal Crofty	950	2,850 9 6
Phœnix Mines	621	2,831 8 6
East Caradon	570	2,357 13 6
Crenver and Abraham	818	2,015 12 0
Prince of Wales	366	1,958 7 6
West Damsel	462	1,738 10 6
East Pool	601	1,559 16 0
Wheal Basset	389	1,508 7 0
Okel Tor	560	1,397 11 0
North Downs	252	1,389 11 6
Glasgow Caradon	300	1,331 16 6
East Carn Brea	428	1,242 5 6
South Wheal Frances	207	1,185 10 6
Prosper United	585	1,019 17 6
West Basset	239	974 16 6
Craddock Moor	219	958 11 0
Par Consols	259	930 7 0
Poldice Mines	224	924 13 0
Emily Henrietta	216	821 9 0
Gawton	251	800 8 0
North Treskerby	157	703 16 0
North Grambler	126	685 14 6
Gonamena	125	649 18 0
Wheal Crelake	219	629 19 0
East Rosewarne	138	624 0 0
Wheal Rose	184	600 13 0
West Maria and Fortescue	175	593 17 6
Botallack	75	552 4 6
Rampfylde	87	543 4 6
Bedford United	190	534 8 0
Kelly Bray	116	493 1 0
Great South Tolgus	147	471 4 6
North Roskear	85	461 2 6
East Russell	102	452 1 6
East Wheal Grenville	103	438 6 0
Treffry's Regulus	44	425 16 0
Brookwood	168	413 4 0
Wheal Friendship	118	403 13 0
West Caradon	92	394 5 0
Copper Hill	93	363 6 0
West's Ore	64	341 12 0
Tincroft	94	335 8 0
East Wheal Basset	61	281 3 0
Belstone	12	280 5 6
Gunnislake	75	278 19 6
Cargoll	21	257 5 0
Cawsand Vale	65	252 0 0
Carn Camborne	145	251 6 6
Levant	33	236 15 6
Matthews's Ore	43	224 19 0
Wheal Crebor	63	215 3 6
Pennance	71	213 2 0
Tresavean	70	194 7 0
Hingston Down	63	162 4 6
Old Gunnislake	33	153 13 6
Falmouth and Sperries	34	140 5 0
West Great Work	41	131 2 0
Feock Regulus	100	127 10 0
North Pool	21	117 1 6
Dolcoath	24	115 16 0
North Crofty	19	113 10 6
Champion's Ore	31	112 7 6
Wheal Buller	21	91 17 6
Rosewarne Consols	23	85 1 6
Sortridge Consols	14	77 0 0
Buglehole's Ore	20	72 0 0
West Tremayne	20	70 10 0
Great Work	10	65 0 0
Crane	8	63 8 0
South Dolcoath	15	57 15 0
South Basset	8	56 4 0
Caradon Consols	31	55 0 6
Devon and Cornwall	25	54 7 6
Tywarnhaile	17	51 5 0
Wheal Busy	25	44 15 0
Wheal Agar	10	42 5 0
Nangiles	13	28 12 0
Pendarves United	10	26 6 0
West St. George	10	24 5 0
Wheal Grenville	7	19 12 0
Huthnance's Ore	9	18 4 6
Grambler and St. Aubyn	4	17 6 0
Collacombe	12	17 2 0
Old Pembroke	3	6 10 6
Great Crinnis	7	2 12 6

COMPANIES BY WHOM THE ORES WERE PURCHASED:—

Vivian and Sons	4382	£17,930 19 3
Freeman and Co.	1772	6,934 5 11
P. Grenfell and Sons	2773	16,597 18 3
Sims, Willyams, and Co.	2562	14,791 8 6
Williams, Foster, and Co.	4431	21,040 6 3
Mason and Elkington	3897	14,048 11 10
Bankart and Sons	1333	3,819 19 9
Copper Miners' Company	2349	8,140 6 0
Charles Lambert	1952	7,480 12 11
Newton, Keates, and Co.	403	2,016 18 4
Sweetland, Tuttle, and Co.	2657	8,172 6 3
Goole Alum Company	85	124 19 3
Total	28,876	£121,335 3 0

HOLLOWAY'S PILLS.—The disagreeable knowledge forces itself upon all that, with the darkening days and changing temperatures, the digestion becomes impaired, the liver disordered, and the mind despondent, unless the cause of the irregularity be expelled from the blood and body by an alterative like these pills. They go directly to the source of the evil, thrust out all impurities from the circulation, reduce distempered organs to their natural state, and correct all defective or contaminated secretions. Such easy means of instituting health, strength, and cheerfulness should be instantly available, to check, if possible, the first symptoms of approaching illness, or, at all events, to break its fierceness, and to check its progress ere it obtains a firm footing.

Just published, price 1s., by post 1s. 1d.,

THE SLATE TRADE IN NORTH WALES.
By JOSEPH KELLOW, QUARRY ENGINEER
(26 years of practical experience),
Being a reprint of a series of Letters on the above subject, published in the MINING JOURNAL.
London: MINING JOURNAL Office, 26, Fleet-street, E.C.

THE IRON TRADE REVIEW.—The Iron Trade Review is now recognised as the leading organ in which the interests of the iron manufacturers of Great Britain are represented. The aim of the proprietors is to provide a journal which shall be worthy of this important branch of national industry. The following matters receive special attention:—Detailed reports of the state of trade in all the important manufacturing districts, with latest intelligence of meetings, and price lists of pig and finished iron. Occasional notices of the Continental and American trades. Condensed information relative to the proceedings of railways and other public companies which have a bearing upon the iron trade. Notices of scientific improvements applicable to the manufacture of iron. Reports on such labour questions as may arise. Notes on Parliamentary Bills bearing on the trade. In addition to the above, leading articles on important topics appear in each issue, and great care is taken that the information contained in the Review shall be thoroughly reliable. The annual subscription is one guinea, payable in advance. Advertisements are inserted on reasonable terms, which may be ascertained on application.—Published for the proprietors, at the Iron Trade Review office, Middlesbrough-on-Tees; and 50, Grey-street, Newcastle-on-Tyne, by M. and M. W. Lambert, printers.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the ST. JUST CONSOLS MINING COMPANY (LIMITED).—ALL CREDITORS or CLAIMANTS of the ABOVE COMPANY who have not received notice from the Registrar of the said Court that their claims have been already admitted, are hereby REQUIRED to COME IN and PROVE their SEVERAL DEBTS or CLAIMS at the Registrar's Office, Truro, on Monday, the 18th day of January inst., at Eleven o'clock in the forenoon, or, in default thereof, they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such proof. And for the purpose of such proof they are either to attend in person, or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court at Truro, such affidavits being sworn either before some Commissioner of the said Court, or before any Court, Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.
W. MICHELL, Registrar of the above-named Court, Truro, Cornwall.
Dated Registrar's Office, Truro, the 4th day of January, 1869.

TO COLLIERY PROPRIETORS, AND OTHERS.

MESSRS. HOLLAND AND WARNER have received instructions from the Mortgagee of the Gresley Wood Colliery to SELL, BY AUCTION, at the Royal Hotel, in Derby, on Tuesday, the 26th day of January, 1869 (instead of the 5th of January, as before advertised), at Two for Three o'clock in the afternoon precisely, in One Lot, and subject to such conditions of sale as will be then produced, all that very valuable FREEHOLD ESTATE, called or known as

THE GRESLEY WOOD COLLIERY,

Situate on the turnpike-road from BURTON to SWADLINCOTE, and within about four miles of Burton-on-Trent, and about one mile from the Midland Railway, on the Leicester and Burton Line.
The ESTATE comprises the valuable COLLIERY, and 48A. 2R. 35P., or thereabouts, of FREEHOLD WOOD LAND, with FIVE highly valuable SEAMS OF COAL thereunder, and including the costly FIXED MACHINERY and FIXED PLANT, together with the gas works adjoining, and also a brick-yard, with the brick-earth, clays, &c.
Possession can be given on completion.
Particulars and conditions of sale may be obtained either from the Auctioneers, Market-street, Leicester; or Messrs. STONE, PAGET, and BILLSON, Solicitors, Leicester.

TO CAPITALISTS.
SLATE QUARRIES FOR SALE IN NORTH AND SOUTH WALES.

MR. GEO. A. H. POTTER has FOR SALE, BY PRIVATE TREATY, FOUR VALUABLE SLATE QUARRIES, called

FOEL FAWR, FOEL FACH, CWM CILAN, AND LLYFNANT,

Situate in the Counties of CARDIGANSHIRE and MONTGOMERYSHIRE.
They are in the immediate vicinity of the railways, shipping wharves, and rivers. Plenty of water to turn any machinery required.
A vein of copper ore runs through a portion of the Foel Fawr property.
For full printed particulars, and to treat, apply to GEO. A. H. POTTER, Auctioneer and Valuer, 17 [illegible]rge-street, Swansea.

NORTH WALES—QUEEN'S FERRY, FLINT.
CLOSE TO THE RAILWAY.

TO BE SOLD OR LET, DESIRABLE FREEHOLD MANUFACTURING PREMISES, with ENGINE-POWER and LAND.—A plot of about one acre, with substantial factories, engine-house chimneys, stable, outbuildings, and sheds, suitable for any manufacturing purpose. ENGINE of most recent construction, and BOILER nearly new.
For further particulars, apply to JOHN TEMPLE, 32, Redcross-street, Liverpool.

IMPORTANT MINING PROPERTY FOR SALE IN RHENISH PRUSSIA.—A BLENDE MINE, giving 3 to 4 tons of blende per fathom; a COPPER MINE, averaging 14 per cent. of copper; and THREE LEAD MINES, with 65 per cent. of lead.
Apply for particulars, to O. J. YOUNGHUSBAND, Esq., Wiehl, Kreis Gummersbach, near Cologne, Prussia.

ENGINES FOR SALE.

FOR SALE, ONE 54 in. cylinder PUMPING ENGINE, 9 feet stroke, equal beam, with or without TWO 12 ton BOILERS.
Also ONE 36 in. PUMPING ENGINE, 9 ft. stroke, with or without a 10 ton BOILER. With an addition of ONE 8 ton BOILER also FOR SALE. To be sold cheap.
Apply to MICHELL and JENKIN, Engineers, Redruth.

FOR SALE,—A FIRST-CLASS SECONDHAND 8-horse power PORTABLE STEAM-ENGINE, of recent construction, by eminent makers.
NEW PORTABLE STEAM-ENGINES, from 5 to 25-horse power, of the highest order, on advantageous terms. Prize Medals awarded—Hamburg, 1863; Paris, 1867.
Apply to BARROWS and STEWART (late Barrows and Carmichael), Engineers, Banbury.

FOR SALE,—A CONDENSING BEAM WINDING ENGINE, with 28 in. cylinder, 6 ft. stroke, metallic piston, and fitted with short D valves, two eccentrics, and link motion, beam 19 ft. 6 in. long, connecting rod and double crank, two lengths of crank shaft, four bearings, two fly wheels 16 ft. diameter, feed and air pumps, and bed plate.
Also, an EGG-END BOILER, 25 ft. 6 in. long by 5 ft., with fittings.
For price, &c., apply to Messrs. INGRAM and BATLEY, Machinery Auctioneers and Valuers, 8, Duke-street, Adelphi, London, W.C.

TO LET, A VALUABLE COAL MINE.—Apply to Mr. GEORGE DAVIDSON, Mawley, Cleobury Mortimer, Shropshire.—Dec. 12, 1868.

IN THE TOWER FOUNDRY IS THE TYNE DEPOT FOR MACHINERY of every description for WOOD and IRONSTONE, CORN-CRUSHING, and PUG MILLS. Also, AGRICULTURAL IMPLEMENTS.
PROPRIETOR,—G. HARLE, JUN.,
No. 49, MAPLE STREET, NEWCASTLE.
PURCHASERS of PORTABLE ENGINES and STEAM CRANES will do well to ask G. HARLE'S price for the same.

OLD HERODSFOOT SILVER-LEAD MINE, LISKEARD.

THE LANDLORD has DECLINED to RENEW the LEASE of this well-known property to the previous lessees.
It has been very productive, and is believed to be the richest part of Herodsfoot, of which it has until now formed the northern section.
The shafts and levels, which are continuous with those of Herodsfoot, are immediately available to about 150 fms., under specially favourable circumstances.
Arrangements are being made to meet stipulated requirements for working under separate management.
For information, address "Old Herodsfoot," care of W. Coleman, Esq., 53, Moorgate-street, London.

ANTIMONY ORE.

THE SUBSCRIBER expects shortly at LONDON a PARCEL of the above, and also a FIRST CONSIGNMENT of YELLOW OXIDE of ANTIMONY. Samples on application.
JAMES THOMSON, 27, King-street, Kilmarnock.

GENERAL MINING COMPANY FOR IRELAND (LIMITED).

MAKERS OF ZINC OXIDE.

OFFICES,—29, WESTMORELAND STREET, DUBLIN
MINES AND WORKS, SILVERMINES, COUNTY TIPPERARY.

The Directors beg to intimate to PAINT and COLOUR MAKERS, INDIA RUBBER MANUFACTURERS, SHIPPERS, and the TRADE generally, that they have COMPLETED the ERECTION of WORKS for the MANUFACTURE of ZINC OXIDE, and that they are now producing ZINC WHITE of GREAT EXCELLENCE and PURITY.
Samples and terms shall be forwarded on application.
H. C. FOWLER, Secretary.
29, Westmoreland-street, Dublin, December 10, 1868.

ESTABLISHED MORE THAN HALF A CENTURY.

THE TAVISTOCK FOUNDRY, IRONWORKS AND HAMMER MILLS,

which have been carried on for more than half a century by
MESSRS. GILL AND CO.,
and obtained a
HIGH REPUTATION FOR
SHOVELS AND OTHER TOOLS
as well as for
ENGINEERING AND FOUNDRY WORK,
have been purchased by
MESSRS. NICHOLLS, MATHEWS, AND CO.,
BEDFORD IRONWORKS, TAVISTOCK.

For thirty years Messrs. NICHOLLS, MATHEWS, and Co., have been the proprietors of the latter works, but are now about to remove to the
TAVISTOCK FOUNDRY,
where, having the advantage of a never-failing stream of water of upwards of 200-horse power, they will have increased facilities for speedily and satisfactorily executing all orders entrusted to them.

Address,—
MESSRS. NICHOLLS, MATHEWS, AND CO.,
TAVISTOCK FOUNDRY, TAVISTOCK.

THE SWEDISH SULPHUR ORE COMPANY
(LIMITED).
Capital £20,000, with power to increase.
In 4000 shares of £5 each, divided into 2000 A shares and 2000 B shares.
£1 per share to be paid on application, £1 10s. on allotment, with the option of paying up in full at a rebate of £5 per cent. per annum on the remaining £2 10s.
No call to be made at less intervals than three months, and no call to exceed in amount £1 per share.

Full prospectuses, reports, and all other information can be obtained of the secretary, at the offices of the company, 148½, Fenchurch-street, London, E.C., to whom application may be made for the remaining unallotted shares.

THE GREAT NORTHERN MANGANESE COMPANY (LIMITED).
NEAR BALA, MERIONETHSHIRE, NORTH WALES.
Capital £15,000, in 3000 shares of £5 each.
DIRECTORS.
RICHARD ROBERTS, Esq., Bala, Director of the Bala Banking Company.
Sir EUSTACE FITZMAURICE PIERS, Bart., Manchester.
H. SOUTHAM, Esq., Merchant, Manchester and Bala.
BANKERS.
THE BALA BANKING COMPANY (LIMITED), BALA.
SOLICITOR.
ALFRED ORRELL WALMSLEY, Esq., Brown-street, Manchester.
AUDITOR.
G. NELSON, Esq., Accountant, Manchester.
AGENT AND SECRETARY AT MANCHESTER—MR. J. K. WILLIAMS.
CHIEF OFFICES,—12, PARSONAGE, MANCHESTER.

The great success of the above undertaking has induced the directors to offer to the public the remaining shares at par.
The next dividend will be from 7½ to 10 per cent., thus affording a safe and permanent investment to parties having capital at command. The business is carefully managed; the working expenses are kept as low as possible; the directors receive no remuneration until the concern has earned and paid to the shareholders in dividends 7½ per cent. per annum; so sanguine are the directors that this will be one of the most successful enterprises of the present time, and prove that limited companies, when carefully and prudently managed by honest and honourable men, are the safest modes of investment of capital.
Prospectuses and applications for shares may be made to the manager of the Bala Banking Company (Limited), Bala; or to the secretary, at the company's offices, in Manchester.

SOUTH MERLLYN MINE COMPANY.
Consisting of 1000 Shares.
Investors and speculators will do well to read the report of Captain H. R. Harvey on this mine, published to-day in these columns.
Address, for particulars, to Mr. E. J. BARTLETT, No. 30, Great St. Helen's, London, E.C., who has a few shares for disposal.

CWM DWYFOR (NORTH WALES) COPPER AND SILVER-LEAD MINES COMPANY (LIMITED).
INCORPORATED UNDER THE COMPANIES ACTS, 1862 AND 1867.
Capital £12,500, in 12,500 shares of £1 each,
Fully paid-up on allotment.
BANKERS.
METROPOLITAN BANK (LIMITED), LONDON.
SECRETARY—Mr. G. CHAMBERS.
OFFICES.
ST. CLEMENT'S HOUSE, ST. CLEMENT'S LANE, LONDON, E.C.

Applications for shares in this remarkable mine, for prospectuses, and forms, and notices of the mine, its geological and mineral character, and extraordinary physical advantages, may be addressed to the secretary, at the offices of the company, where also specimens of the ores can be seen.

SOUTH CARN BREA MINE,
IN THE PARISH OF ILLOGAN, CORNWALL.
Divided into 5000 shares.
TO BE CONDUCTED ON THE COST BOOK PRINCIPLE.
A Committee of Management to be chosen from the first general meeting.

This mine is situated in the parish of Illogan, and is bounded on the north by the celebrated Carn Brea Mines; south, by North Basset; south west, by West Basset; and east, by Wheal Uny. It was suspended in June, 1866, when the price of tin had reached its lowest price, £42 10s. per ton; the loss, nevertheless, in the last six months' working was only £6; at the present price of tin, £60 per ton, a profit of over £300 would have been the result.
The engine-shaft is sunk to the depth of 136 fathoms, and the mine is dry to the 85 fathom level, about 50 fathoms have to be drained to reach the bottom, which would take four or five months to accomplish. In the meantime returns of tin could be made from the ground left standing above the 85 fathom level.
The reports, by agents who inspected the mine before the water was let in, shew that the north part of the lode, from the 118 to the 128, is standing entire, and is worth about £20 a fathom. This point alone shews a large reserve of tin ground discovered, which, with the present price of tin, can be worked at a good profit.
Adjoining this mine, to the east, is Wheal Uny, and the workings are on the same lode that is there producing such large quantities of tin; a very important feature is, that the shaft is now sunk to the depth, 130 fathoms, at which a marked improvement took place in the quality of the tin ore at Wheal Uny, and where, as the reports shew, there is a similar improvement in South Carn Brea.
The machinery and plant have remained undisturbed on the mine, and comprise a pumping-engine, with pitwork to the bottom of the shaft; a winding-engine, a stamping engine with 68 heads of stamps attached; dressing-floors, laid out with all the improved apparatus for returning tin; burning-house, smiths' and carpenters' shops, and everything necessary for extensive working.
These are to be taken over by the company at a valuation, each party chosing a valuer, and in case of their differing, a third to be called in to decide. The sum, thus agreed on, to be paid in four equal quarterly instalments.
Application for shares to be made either to Messrs. WATSON BROTHERS, 1, St. Michael's Alley, Cornhill, London, or to Messrs. R. H. PIKE and SON, Camborne.
The mine is divided into 5000 shares, of which nearly one-half are already applied for.
It is proposed to make a call of 5s. per share at the first meeting, and it is confidently expected that about 20s. per share, will be sufficient to bring the mine into a profitable state.
A detailed prospectus with reports will be forwarded on application.

THE LOMBARD EXCHANGE AND NEWS ROOM,
LOMBARD STREET, LONDON.
MANAGER.
MR. J. H. YOUNGHUSBAND.
(Late Treasurer and Secretary of the Liverpool Exchange.)
SUBSCRIPTION.
£3 3s. per annum, or 10s. monthly, payable in advance.

The room is supplied with Newspapers, both home and foreign; Reuter's Telegrams, giving commercial, political, and general telegraphic information; Shipping Lists, Directories, Time Tables, and other books of reference.
There is also an excellent refreshment room attached, as well as a reading and writing room, comfortably furnished.
The attention of country bankers, solicitors, manufacturers, and others is invited to this institution, which will be found very convenient to gentlemen whose business engagements oblige them frequently to visit the metropolis.
For further particulars, apply to the Manager of the Room; or to Mr. G. W. BENWELL, Secretary of the City Offices Company, Palmerston-buildings, London, E.C.

ENGINES AND BOILERS FOR SALE.

MESSRS. NICHOLLS, MATHEWS, AND CO. have FOR SALE ENGINES of VARIOUS SORTS and SIZES, AND SEVERAL GOOD TEN TON BOILERS. All are in excellent condition, and well worthy the attention of purchasers. Also, a WATER WHEEL, 35 ft. diameter, 3 ft. 2 in. breast, with iron axle, complete; and one 12 head STAMPS, axle, stands, frames, 12 heads of stamps, iron lifters, and two driving-wheels, complete.
Full particulars may be obtained by applying to Messrs. NICHOLLS, MATHEWS and Co., Tavistock Foundry, Tavistock.

Every Wednesday, price 4d.; in monthly parts, 1s. 6d.; yearly subscription (including postage), 17s. 6d.

SCIENTIFIC OPINION: A Weekly Record of Scientific Progress at Home and Abroad.—"Scientific Opinion" is the only weekly journal in England which is exclusively devoted to Science. In addition to Leading Articles on current topics of interest to the Scientific World, each number comprises papers selected from a variety of sources, and treating of Science in all its departments. The Weekly Reviews of Books and the Bibliography keep the reader *au courant* with the literature of science all over the world, and the merits of each new work of note; while the Reports of Meetings of learned bodies—British and foreign—being for the most part specially furnished for this journal, render it an accurate mirror of the proceedings of the scientific societies, a carefully compiled diary of whose meetings is given weekly. The columns of "Scientific Opinion" are always available for the temperate discussion of moot questions in science, and generally as a channel of communication for scientific correspondents. Notes, Queries, and Memoranda constitute a very useful and attractive department of each number, and under the heading of Answers to Correspondents, editorial solutions of difficult questions, &c., are to be found.
Office, 75, Great Queen-street, London, W.C. Sold by all newsvendors.

RAILWAY WAGON WORKS, BARNSLEY.

MESSRS. G. W. AND T. CRAIK
ARE PREPAR TO
SUPPLY COAL AND COKE WAGONS
OF EVERY DESCRIPTION,
Either for cash, or by deferred payments through wagon-leasing companies.

WAGONS PROMPTLY REPAIRED.

TANK LOCOMOTIVES,

FOR SALE OR HIRE.
HENRY HUGHES AND CO.,
LOUGHBOROUGH.

THE BEVERLEY IRON AND WAGON COMPANY

(LIMITED),
MANUFACTURERS OF RAILWAY WAGONS, WHEELS
AXLES, LORRYS, CARTS, WOOD WHEELS, &c.,
IRONWORKS, BEVERLEY, YORKSHIRE.

MILNER'S STRONG HOLDFAST AND FIRE-RESISTING SAFES,

CHESTS, DOORS, AND STRONG ROOMS,
With the progressive and recent improvements effected after half a century's experience, effectually guard against FIRE and BURGLARS.
LIVERPOOL, MANCHESTER, SHEFFIELD, LEEDS, HULL, and
47A, MOORGATE STREET, CITY, LONDON.

TO COLLIERY PROPRIETORS.

UPWARDS of 6000 LARCH, 4000 OAK POLES, 100 OAK and OAK PLANKS upwards of 20 feet long; ELM COAL-PIT RINGS, ready cut, in stock.
All kinds of ENGLISH TIMBER supplied in the round, and OAK and LARCH SCANTLING cut to sizes for railway and coal-wagon building.
Dealer in all kinds of BRITISH TIMBER.
MILLWRIGHTS, ENGINEERS, COACH BUILDERS, WHEELWRIGHTS, &c., supplied on the most reasonable terms.

JAMES ATKINSON,
No. 63, GRANBY ROW, MANCHESTER.

MINING INSTRUMENTS.

JOHN DAVIS,
MANUFACTURER OF MINING AND SURVEYING INSTRUMENTS,
DERBY.
MAKER (by appointment) of HEDLEY'S DIALS.
Price List on application.
STERNE'S PATENT PNEUMATIC SPRINGS FOR COAL CAGES.
Price £8 10s. per set of four.

F. N. GISBORNE'S PATENT MECHANICAL BALANCE-WEIGHT SIGNALS FOR MINES, &c.

THESE SIGNALS supply a want long felt in giving INSTANT COMMUNICATION in MINES at SEVERAL PLACES at the SAME TIME without the aid of electricity, but by a single rod or chain; so that a degree of safety is ensured hitherto unknown.
The price is also very low, and the mechanism so simple that any ordinary mechanic could put it in order if out of adjustment.
The same patent, as applied to ships, has received the approval of the Chief Engineer, Chatham Dockyard (vide *Times*, Aug. 13, 1868).
SOLE AGENT FOR MINERS:
MR. GEORGE B. JERRAM, ENGINEER, WASHINGTON BUILDINGS, BRUNSWICK STREET, LIVERPOOL.
N.B.—Mr. JERRAM is now visiting the different mines with working models.

SMITH AND FORREST,

ROSIN DISTILLERS, GREASE AND VARNISH MANUFACTURERS,
HOLT TOWN OIL WORKS, MANCHESTER,
MANUFACTURERS OF VEGETABLE OILS, &c.

ANTI-FRICTION GREASE, 10s. to 14s. per cwt.
Wire rope ditto, free from acid, 15s. per cwt. Liquid ditto (between thick and thin), for trams, &c., 8s. to 12s. per cwt.
SKIP, HUTCH, CORVE, and WAGON OILS, from 8s. to 12s. per cwt.
TORCH OIL, 1s. to 1s. 6d. per gallon.
COPPER-SPOUTED QUART LAMPS, 4s.; TORCH WICK for ditto, 6d. per lb.
PATENT ANTI-CORROSIVE BLACK VARNISH,
"Paint Substitute for Wood or Iron," ready for use, 1s. to 2s. 6d. per gallon.
We shall be glad to furnish a detailed price-list on application.
Orders by post receive prompt attention.

TO MANUFACTURERS OF YELLOW METAL, MERCHANTS, AND OTHERS.

CAUTION.

WHEREAS, it has recently come to the knowledge of the directors of ELLIOTT'S PATENT SHEATHING AND METAL COMPANY (LIMITED) that quantities of YELLOW METAL made by other Manufacturers have been exported to India and elsewhere, bearing a FRAUDULENT IMITATION of the exclusive BRAND or TRADE MARK of the company for Metal of that description—namely, a representation of a Rupee, with or without the word "soft" printed thereunder,
NOTICE IS HEREBY GIVEN, that in case any manufacturer, or other person, shall STAMP, IMPRESS, or AFFIX to or on any YELLOW METAL not made by the said company, the said BRAND or TRADE MARK, or any colourable imitation thereof,—or in case any merchant or other person shall EXPORT or SELL any such Yellow Metal so marked as aforesaid,—PROCEEDINGS will forthwith be COMMENCED against such manufacturer, merchant, or other persons, to RESTRAIN him or them from such wrongful acts as aforesaid, and RECOVER DAMAGES in respect thereof.
RYLAND AND MARTINEAU, Solicitors to the said Company.
Birmingham, August, 1868.

ASSAY OFFICE AND LABORATORY,

No. 2, CROWN CHAMBERS, CROWN COURT,
THREADNEEDLE STREET,
CONDUCTED BY W. T. RICKARD, F.C.S., &c.
(Late MITCHELL and RICKARD).
Assays and analyses of every description of mineral and other substances manures, &c.
Gentlemen going abroad for mining purposes instructed in assaying, and the most improved methods of reducing gold, silver, and other metals.
MINING PROPERTIES INSPECTED AND REPORTED ON.

REMOVAL.

POST-OFFICE DIRECTORY PUBLISHING OFFICES REMOVED to No. 51, GREAT QUEEN STREET, LINCOLN'S INN FIELDS, W.C.
The LONDON DIRECTORY for 1869 is now ready.

HOGG'S GUIDE TO THE IRON TRADES.—

Fourth edition, eighth thousand, price 10s.
This popular Treatise, revised and improved, contains a series of tables on weight and measurement of metals, stone, and timber; gross and net sectional areas of angle-irons; strength of materials; Government chain and anchor tests; tests of iron and steel from different makers; boiler making, forging, iron rolling, cog-wheel pattern making, moulding, &c. Also articles on girder making, pile driving, and all matters connected with practical engineering and smiths' work, verified in most cases by the actual experience of the author.
Orders to be sent to JOSEPH HOGG, Sandwell Road, West Bromwich, Staffordshire.

NOTICE TO INVESTORS.

STATISTICS OF THE MINES OF CORNWALL AND DEVON

WITH OBSERVATIONS UPON THEM.
I beg to inform the public that my work, under the above title, for 1869, will be published early in January, and will contain the following particulars, viz.:—The geological position, present prospects, names of purser, manager, and secretary, with statement of the annual returns of each mine during the last ten years, and of dividends paid to the present time.
This work will show with completeness and explicitness a variety of particulars not afforded in any other publication, but which it is important, especially for investors, to know—such as depth of mine, hands employed, returns, length of time at work, &c.
Only a limited number of copies will be issued. THOMAS SPARGO.
Subscribers' names will be received at my office, 224 and 225, Gresham House, Old Broad-street, London, E.C., and at the office of the MINING JOURNAL.

THE NEWCASTLE CHRONICLE AND NORTHERN

COUNTIES ADVERTISER. (ESTABLISHED 1764.)
Published every Saturday, price 2d., or quarterly 2s. 2d.
Offices, 42, Grey-street, Newcastle-upon-Tyne; 50, Howard-street, North Shields; 195, High-street, Sunderland.

CURATIVE ELECTRICITY.—TO THE PARALYSED AND

NERVOUS.—HARRY LOBB, M.R.S.E., L.S.A., Surgeon Electrician, 31, Sackville-street, Piccadilly, London, and 2, Old Steyne, Brighton, can be CONSULTED on all DISEASES of a DEBILITATED NERVOUS SYSTEM.
See his recent work on Curative Electricity. By post thirteen stamps.
SIMPKIN, MARSHALL, and Co., London.

NICHOLLS, MATHEWS, AND CO., ENGINEERS,

TAVISTOCK FOUNDRY, TAVISTOCK.
MANUFACTURERS of STEAM ENGINES of EVERY DESCRIPTION, made on the BEST and NEWEST PRINCIPLES. We beg more especially to call the attention of the public to the MANUFACTURE of our BOILERS, which have been tested by most of our leading engineers. PUMP WORK CASTINGS of EVERY DESCRIPTION, both of brass and iron. HAMMERED IRON and HEAVY SHAFTS of ANY SIZE. CHAINS made of the best iron, and warranted. MINERS' TOOLS and RAILWAY WORK of EVERY DESCRIPTION.
ALL ORDERS FOR ABROAD RECEIVE their BEST ATTENTION.
NICHOLLS, MATHEWS, and Co. have had 20 years' experience in supplying machinery to foreign mines, and selecting experienced workmen to erect the same, where required.
Messrs. NICHOLLS, MATHEWS, and Co. have always a LARGE STOCK of SECOND-HAND MINE MATERIALS in stock, and at moderate prices.

WILLIAMS'S PERRAN FOUNDRY COMPANY,

PERRANARWORTHAL, CORNWALL.
MANUFACTURERS of STEAM PUMPING and EVERY OTHER KIND of ENGINES, together with BOILERS, PUMP CASTINGS, and MINING TOOLS of every description, of the very best quality. Estimates given for the supply of any amount of machinery.
London Agent.—Mr. EDWARD COOKE, 76, Old Broad-street, London, E.C.

RAILWAY CARRIAGE COMPANY (LIMITED.

ESTABLISHED 1847.
OLDBURY WORKS, NEAR BIRMINGHAM.
MANUFACTURERS of RAILWAY CARRIAGES and WAGONS, and EVERY DESCRIPTION of IRONWORK.
Passenger carriages and wagons built, either for cash or for payment over a period of years.
RAILWAY WAGONS FOR HIRE.
CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.
LONDON OFFICES,—6, STOREY'S GATE, GREAT GEORGE STREET, WESTMINSTER.

THE BIRMINGHAM WAGON COMPANY (LIMITED)

MANUFACTURE RAILWAY WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.
EDMUND FOWLER, Sec.
WAGON WORKS,—SMETHWICK, BIRMINGHAM.
*** Loans received on Debenture; particulars on application.
London Agent—Mr. E. B. SAVILE, 67, Victoria-street, Westminster, S.W.

STAFFORDSHIRE WHEEL AND AXLE COMPANY

(LIMITED AND REDUCED),
MANUFACTURERS of RAILWAY CARRIAGE, WAGON, and CONTRACTORS' WHEELS and AXLES, and other IRONWORK used in the CONSTRUCTION of RAILWAY ROLLING STOCK.
OFFICES AND WORKS,
HEATH STREET SOUTH, SPRING HILL, BIRMINGHAM.
LONDON OFFICE.—118, CANNON STREET, E.C.

STEAM-BOILERS made by WILLIAM WILSON, LILYBANK

BOILER WORKS, GLASGOW, on the most improved principles, for home and export. All boilers made of the best material and workmanship, proved and warranted tight under a high pressure, and delivered at any railway station or shipping port in the kingdom at moderate rates. Lithograph of boilers forwarded post-free on application.

BRITISH, COLONIAL, AND FOREIGN PATENTS,

REGISTRATION OF DESIGNS, COPYRIGHTS, TECHNICAL TRANSLATIONS, DRAWINGS, &c.
MICHAEL HENRY,
Mem. Soc. Arts, Assoc. Soc. Engineers, Compiler of the "Inventors' Almanac," and the Author of the "Defence of the Present Patent Law,"
PATENT REGISTRATION AND COPYRIGHT AGENT AND ADVISER.
Inventors advised in relation to Patents and Inventive and Industrial Matters. Printed information sent free by post. Specifications drawn and revised. Searches conducted. Abstracts, Cases, and Opinions drawn.
Mr. HENRY has had especial experience in technical French, and in French Manufacturing and Commercial Matters.
Offices, 68, Fleet-street, E.C., London, corner of and entrance in Whitefriars-street.

BICKFORD'S PATENT SAFETY FUSE

Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXPOSITION, in Paris, 1867.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—
EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.

WILLIAM HANN AND SON beg to offer to SUPPLY

COLLIERY OWNERS, and the public generally, with their
PATENT SAFETY LAMPS,
Which have been proved INEXPLOSIVE in the highest obtainable current of gas, of 48 ft. per second. No. 1 weighs 24 ozs., is simple in its construction, burns with a steady and nearly uniform flame in moderate currents, gives a good light, and is in every respect a practicable lamp. Price, 9s. each; if in quantities of a dozen or upwards, 8s. 6d. each, delivered free. Orders received by—
WILLIAM HANN AND SON,
HETTON COLLIERY, FENCE HOUSES.

DYNAMITE, OR NOBEL'S PATENT SAFETY BLASTING POWDER.

DYNAMITE is the SAFEST and most POWERFUL BLASTING COMPOUND in general use. Accidents are almost impossible, as it is only exploded by a strong percussion cap. It will not explode from a spark or concussion. If set fire to, it burns quietly and harmlessly away, without smoke or any explosion. Prepared in cartridges for mines and underground workings. Sold by—
WEBB AND CO., CARNARVON,
Sole consignees in England from the Patentee and Manufacturer.

JOHN AND EDWIN WRIGHT,

PATENTEES.
(ESTABLISHED 1770.)
MANUFACTURERS OF EVERY DESCRIPTION OF IMPROVED
PATENT FLAT AND ROUND WIRE ROPES,
From the very best quality of charcoal iron and steel wire.
PATENT FLAT AND ROUND HEMP ROPES.
SHIPS' RIGGING, SIGNAL AND FENCING STRAND, LIGHTNING CONDUCTORS, STEAM PLOUGH ROPES (made from Webster and Horsfall's patent steel wire), HEMP, FLAX, ENGINE YARN, COTTON WASTE, TARPAULING, OIL SHEETS, BRATTICE CLOTHS, &c.
UNIVERSE WORKS, MILLWALL, POPLAR, LONDON.
UNIVERSE WORKS, GARRISON STREET, BIRMINGHAM.
CITY OFFICE No. 5, LEADENHALL STREET, LONDON, E.C.

Swan Rope Works.

GARNOCK BIBBY, AND CO.,

CHAPEL STREET, LIVERPOOL,
MANUFACTURERS of FLAT and ROUND HEMP and IRON and STEEL WIRE ROPES for MINING, RAILWAY, and SHIPPING PURPOSES.
MANILLA ROPE of SUPERIOR QUALITY, FIFTY PER CENT. STRONGER and THIRTY PER CENT. CHEAPER than Russian hemp rope.
WIRE ROPE of FIRST QUALITY WIRE, and the HIGHEST STANDARD of STRENGTH.

MUSHET'S
TITANIC CAST STEEL,

FOR
BORERS, ROCK-DRILLING MACHINES, LATHE TOOLS, DRILLS, CHISELS, TAPS AND DIES, &c., &c. SOLID CAST-STEEL HAMMERS AND SLEDGES, FILES, &c.

SOLE MANUFACTURERS,
TITANIC STEEL AND IRON COMPANY, LIMITED,
COLEFORD, GLOUCESTERSHIRE.

AGENTS FOR SCOTLAND,—
MESSRS. JOHN DOWNIE AND CO., 1, ROYAL BANK PLACE, GLASGOW,
Where useful samples may be obtained.

HEATON'S PATENT.

THE LANGLEY MILL STEEL & IRONWORKS COMPANY

(LIMITED),
LANGLEY MILL, NEAR NOTTINGHAM,
Are now making Cast-Steel suitable for Tools, Taps, Dies, Chisels, &c., &c., Shear Steel, and Iron of a very superior quality, by their direct process, under the superintendence of the Patentee.
The range of quality which this process secures renders the Steel and Iron suitable for almost every purpose to which these metals can be applied. Also, CAST-STEEL CASTINGS of all kinds from PATTERNS or DRAWINGS.

CLAYTON, SHUTTLEWORTH, AND CO. are now prepared to deliver PORTABLE ENGINES of most sizes on receipt of Orders.—PARIS EXHIBITION, 1867, GOLD MEDAL.

CLAYTON, SHUTTLEWORTH, AND CO.,

At the Great Triennial Trials of the ROYAL AGRICULTURAL SOCIETY OF ENGLAND, held at Bury St. Edmunds, July, 1867, received the following AWARDS:—
For Single Cylinder Portable Steam Engine,—THE FIRST PRIZE OF £25.
For Double Cylinder Portable Steam Engine,—THE FIRST PRIZE OF £25.
For Horizontal Cylinder Fixed Engine,—THE FIRST PRIZE OF £20.
For Double Blast Finishing Thrashing Machine,—THE FIRST PRIZE OF £15.
Also, THE SOCIETY'S SILVER MEDAL for ADJUSTING BLOCKS for Machines.

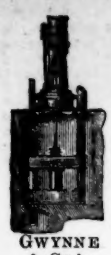
The duty performed by all C., S., and Co.'s Engines on this occasion considerably exceeded that of any others: C., S., and Co. refer with pleasure to the fact that the duty of their "Commercial" or Single Valve Engine at Chester, so long ago as 1858, was not equalled by any "ordinary" Engine at Bury.
CLAYTON, SHUTTLEWORTH, AND CO., LINCOLN;
And 78, LOMBARD STREET, LONDON.

PATENT FLEXIBLE TUBING

AND BRATTICE CLOTH FOR MINES
MANUFACTURED BY
ELLIS LEVER,
WEST GORTON WORKS, MANCHESTER.

GWYNNE & CO.'S IMPROVED CHAIN-PUMP, *Worked direct by Steam-Engine.*

These pumps work without valves or packing, and raise a considerable quantity of water. They will pass sand, mud, or coal without choking, and require only very inexpensive repairs.

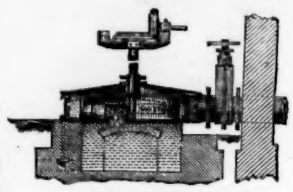


GWYNNE & CO.'S DOUBLE-ACTING PUMPING-ENGINE.

As supplied to the Admiralty Graving Docks, Malta, to lift from 200 to 2000 gallons per minute. The engine is of inverted vertical cylinder construction. The pump barrel and piston are of gun-metal, and the whole very strong and compact.

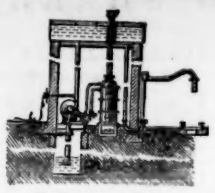
GWYNNE & CO.'S IMPROVED PLUNGER HAND PUMP.

A very neat and extremely compact arrangement; will work for years without getting out of order. These pumps are peculiarly adapted for mines, for which great numbers have been supplied in situations where no other pump could be applied for want of space. They are equally adapted for use as feed-pumps, by driving them with strap from a rigger in place of the fly-wheel.



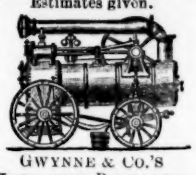
GWYNNE & CO.'S IMPROVED TURBINE WATER-WHEEL.

Compact, easy to erect, economical, simple, and perfectly adapted to all situations. Made of every power from 1 to 300 horse. These turbines are adapted for every class of work. Prices on receipt of particulars.



GWYNNE & CO.'S PATENT COMBINED STEAM-PUMP, *As Applied to Railway Stations.*

The vertical boiler supplies the engine with steam, the pump discharging the water lifted from the well into the tank above, whence it may be drawn as occasion requires, for feeding locomotives, washing the carriages, as a fire-engine, &c. Estimates given.

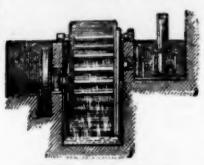


GWYNNE & CO.'S IMPROVED PORTABLE STEAM-ENGINE.

Light, simple in construction, durable, and economical, and very superior to "agricultural" engines. From 2½ to 30 horse power.

GWYNNE & CO.'S PATENTED WIND-POWER PUMPING MACHINERY. *Designed for Drainage and Irrigation Purposes*

Suitable also for supplying the mansions of noblemen or gentlemen. Works continuously day and night without attention. Made from ⅛ to 20 horse power.

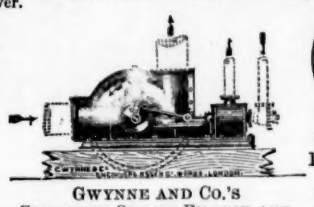


GWYNNE & CO.'S PATENT WATER POWER PUMPING MACHINERY.

Extremely useful wherever water-power is available. The centrifugal pump is worked by gear from the water-wheel. Suitable for supplying country mansions with water. No expense when once fitted. Made of all powers.

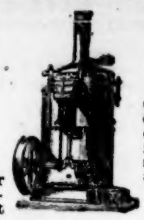
GWYNNE & CO.'S IMPROVED BULLOCK OR HORSE POWER PUMPING MACHINERY.

For situations where steam, water, or wind power are not available. Portable, easy to erect, and not liable to get out of order. From 1 to 6 horse power.



GWYNNE AND CO.'S COMBINED STEAM-ENGINE AND PATENT CENTRIFUGAL PUMP.

Small and powerful, low in cost, economical in work. No skilled labour required. Inexpensive foundations. First Prize Medal awarded at Paris last year for this arrangement.

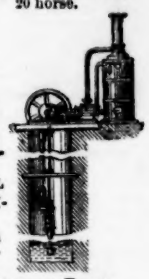


GWYNNE & CO.'S IMPROVED VERTICAL STEAM-ENGINE.

Occupies little space, compact, safe, and easy to work. Made from the very best selected materials. Of all powers from 2 to 20 horse.

GWYNNE & CO.'S IMPROVED HORIZONTAL HIGH-PRESSURE STEAM-ENGINE.

With or without expansion gear, for economical working. From 4 to 100 h. p.



GWYNNE & CO'S IMPROVED DEEP WELL PUMP.

Worked direct by steam-engine at the mouth of the well. This arrangement is invaluable in situations where, from peculiar circumstances, the centrifugal pump is inapplicable.

Large and fully Illustrated Catalogues sent on receipt of 12 postage stamps

TWELVE PRIZE MEDALS, taken at the Exhibitions of the Principal Cities of the World, TESTIFY TO THE GREAT EXCELLENCE OF THIS MACHINERY.

☞ TO PREVENT MISTAKES, PLEASE ADDRESS IN FULL—

GWYNNE AND CO.,

HYDRAULIC AND MECHANICAL ENGINEERS, ESSEX STREET WORKS, STRAND, LONDON, W.C.

CHAPLIN'S PATENT PORTABLE STEAM ENGINES AND BOILERS.

PRIZE MEDAL, INTERNATIONAL EXHIBITION, 1862.

STATIONARY ENGINE, From 1 to 30-horse power. No building required.

PORTABLE HOIST, 1 to 30-horse power. With or without jib.

STEAM CRANE, 30 cwts. to 20 tons. For wharf or rail.

CONTRACTORS' LOCOMOTIVE, 6 to 27-horse power. For steep inclines and quick curves.

TRACTION ENGINES, 6 to 27-horse power. Light and heavy

SHIP'S ENGINE, Winding, Cooking, and Distilling. Passed by Government for half water.

ENGINES of each class KEPT IN STOCK FOR SALE or HIRE, and all GUARANTEED as to EFFICIENCY, MATERIALS, and WORKMANSHIP.

WIMSHURST AND CO., ENGINEERS, LONDON STREET, COMMERCIAL ROAD, LONDON, E. (at Stepney Station of Blackwall Railway.)

IMMENSE SAVING OF LABOUR.

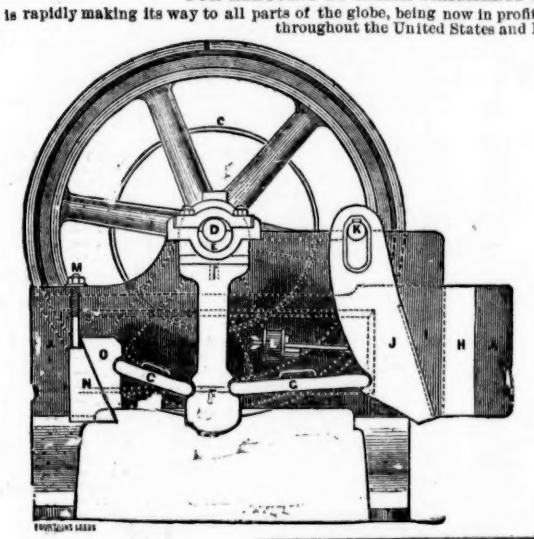
TO MINERS, IRONMASTERS, MANUFACTURING CHEMISTS, RAILWAY COMPANIES, EMERY AND FLINT GRINDERS, McADAM ROAD MAKERS, &c., &c.

BLAKE'S PATENT STONE BREAKER,

OR ORE CRUSHING MACHINE,

FOR REDUCING TO SMALL FRAGMENTS ROCKS, ORES, AND MINERALS OF EVERY KIND.

It is rapidly making its way to all parts of the globe, being now in profitable use in California, Washoe, Lake Superior, Australia, Cuba, Chili, Brazil, and throughout the United States and England. Read extracts of testimonials:—



The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw s about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. —— THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton. JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

For circulars and testimonials, apply to—

H. R. MARSDEN, SOHO FOUNDRY,

MEADOW LANE, LEEDS,

ONLY MAKER IN THE UNITED KINGDOM.

CAUTION!

BLAKE'S PATENT STONE BREAKER,

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

SOLE MAKER IN ENGLAND,

H. R. MARSDEN, SOHO FOUNDRY, MEADOW LANE, LEEDS.

ORMEROD, GRIERSON, & CO.,

ST. GEORGE'S IRONWORKS, HULME, MANCHESTER,

Have the largest assortment in the Trade of PATTERNS,

SPUR WHEELS, BEVEL WHEELS, MITRE WHEELS.

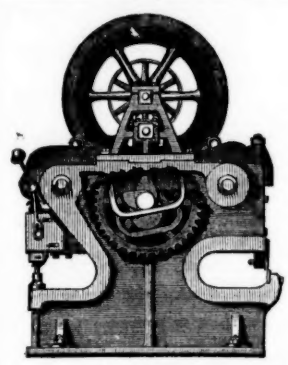
ALSO

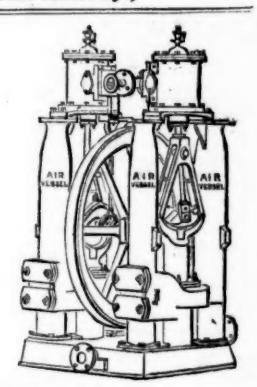
FLY WHEELS, DRIVING PULLEYS, AND DRUMS

CAN BE SUPPLIED BORED AND TURNED, IF REQUIRED.

CATALOGUES ON APPLICATION.

ALSO, MANUFACTURERS OF BLAST ENGINES, COLLIERY AND ALL OTHER DESCRIPTIONS OF STATIONARY ENGINES AND BOILERS, MILL GEARING, &c.





JOHN CAMERON,

MAKER OF

STEAM PUMPS, PORTABLE ENGINES, PLATE BENDING ROLLERS, BAR AND ANGLE IRON SHEARS, PUNCHING AND SHEARING MACHINES, PATENTEE OF THE DOUBLE CAM LEVER PUNCHING MACHINE, BAR SHEARS, AND RAIL PUNCHING MACHINES,

EGERTON STREET IRON WORKS,

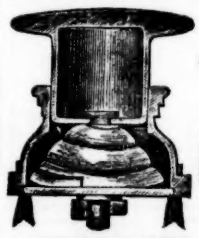
HULME, MANCHESTER.

THOMAS TURTON AND SONS,

MANUFACTURERS OF

CAST STEEL for PUNCHES, TAPS, and DIES, TURNING TOOLS, CHISELS, &c.

CAST STEEL PISTON RODS, CRANK PINS, CONNECTING RODS, STRAIGHT and CRANK AXLES, SHAFTS and FORGINGS of EVERY DESCRIPTION.



DOUBLE SHEAR STEEL	FILES MARKED
BLISTER STEEL,	T. TURTON
SPRING STEEL,	EDGE TOOLS MARKED
GERMAN STEEL,	WM. GREAVES & SON

Locomotive Engine, Railway Carriage and Wagon Springs and Buffers.

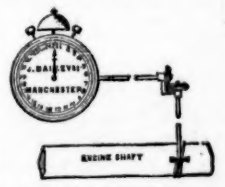
SHEAF WORKS AND SPRING WORKS, SHEFFIELD.

LONDON WAREHOUSE, 35, QUEEN STREET, CANNON STREET, CITY, E.C

Where the largest stock of steel, files, tools, &c., may be selected from.

J. BAILEY AND CO.'S

WINDING INDICATORS AND SIGNAL BELLS.



Illustrated catalogue of useful inventions, 6 stamps.

ALBION WORKS, SALFORD, LANCASHIRE.

HEALTH AND MANLY VIGOUR.—A Medical Man, of Twenty Years' experience in the treatment of Nervous Debility, Spermatorrhœa, and other affections which are often acquired in early life, and unfit sufferers for marriage, and other social duties, has published a book giving the FULL BENEFIT of his LONG EXPERIENCE, GRATIS, with plain directions for the recovery of health and strength. A single copy sent to any address on receipt of one stamp.
Address to the "Secretary," Institute of Anatomy, Birmingham.

Just published, post free for two stamps.

DR. WATSON (of the LOCK HOSPITAL), F.R.A.S., Member of the College of Physicians and Surgeons, on the SELF-CURE of NERVOUS and PHYSICAL DEBILITY, Lowness of Spirits, Loss of Appetite, Timidity, Incapacity for Exertion, &c., with means for perfect restoration Free for 2 stamps by Dr. WATSON, No. 1, South-crescent, Bedford-square, London. Consultations daily from 11 till 2, and 5 till 8; Sundays, 10 till 1.
N.B.—RECENT CASES OF INFECTION CURED IN A FEW DAYS.

Just published, post free for one stamp,

WONDERFUL MEDICAL DISCOVERY, showing the true causes of Nervous, Mental, and Physical Debility, lowness of Spirits, Indigestion, Want of Energy, Premature Decline, with plain directions for perfect restoration to health and vigour in a few days,
WITHOUT MEDICINE.
Sent free on receipt of one stamp, by W. HILL, Esq., M.A., Berkeley Ho South-crescent, Russell-square, London, W.C.

WEST END STOCK, SHARE, AND INVESTMENT AGENCY.

INVESTMENTS in PUBLIC SECURITIES effected on the most advantageous terms.
LOANS GRANTED on marketable stocks and shares.
EXCHANGES of STOCKS and SHARES NEGOCIATED.
This agency affords West End operators facilities hitherto to be had only in the City.

F. LIMMER, Secretary.
9, Adam-street, Adelphi, London, W.C.
Office hours, Ten till Four.

FOR SALE :—

1 Wheal Seton.	30 Hingston Down.	15 Wheal Uny, £3 13s.
5 Great Laxey, £19⅜.	30 So. Condurrow, 17s6d.	50 Prosper.
40 Chontales, £2 3s. 9d.	10 East Caradon, £8 3s9d	30 New Lovell, £2 2s.
10 Great Vor, £10¾.	35 Don Pedro.	50 Drake Walls.
20 Yudanamutana.	15 Chiv. Moor, £5 3s. 9d.	150 Tamar Valley.
1 Wt. Chiverton, £58¾.	80 Prince of Wales, 22s3d	20 West Great Work.
3 Tincroft, £17⅛.	40 No. Crofty, £1 5s. 9d.	2 Herodsfoot.
3 Cook's Kitchen, £13¼	25 Kitty (St. Agnes).	15 Trelawny.
100 Port Phillip.	20 Chiverton, £3 3s. 9d.	5 East Basset.
15 East Lovell, £9⅜.	20 Marke Valley, £8 18 6	20 Great So. Chiverton.
50 No. Treskerby, 17s 6d	35 Taquaril (Gold).	

BUYERS of 20 Great North Laxey, 9s. 6d. ; 20 Frank Mills, £3 3s. 9d.
SPECIAL BUSINESS in East Caradon.

, Shares in the above list having no price affixed we are in a position to deal in at the market price of the day.

Parties of respectability, desirous of buying shares for future payments, can have every facility afforded them.

Seventy-five per cent. advanced on all stocks recommended by and purchased through this Agency.

TAMAR VALLEY SILVER-LEAD AND NEW CLIFFORD COPPER MINES strongly recommended. Full particulars on application.

MR. EDWARD BREWIS, STOCK AND SHAREDEALER, No. 34, OLD BROAD STREET, LONDON, E.C., has BUSINESS, for cash or account, in all the various Mining Securities at best market prices.
Bankers: The Alliance Bank, London, E.C.

MINING SETTS IN THE SOUTH OF IRELAND.—Parties desirous of OBTAINING INFORMATION respecting the MINERAL PROSPECTS of several districts in the SOUTH OF IRELAND should at once CONSULT Capt. WILLIAM TONKIN. The district is rich in copper, lead, red hematite, manganese, and other minerals, and capable of easy development.

For further particulars, apply to Capt. WILLIAM TONKIN, Glandore, near Leap, Cork, Ireland.

RAILWAY SHAREHOLDERS, or those thinking of becoming so, should READ HANNAM and Co.'s JUNE CIRCULAR, free by post from either of their offices,—449, STRAND, LONDON, W.C., or ROYAL INSURANCE BUILDINGS, MANCHESTER.

FOREIGN STOCKHOLDERS, or those thinking of becoming so, should read HANNAM and Co.'s JUNE CIRCULAR.

ANGLO-AMERICAN OR ATLANTIC CABLE STOCKS.—All interested in these undertakings, or about to become so, should read HANNAM and Co.'s MARCH and APRIL CIRCULARS, as well as JUNE CIRCULAR.

GOLD AND SILVER MINING.—All interested, or wishing to become so, in undertakings of this character, should read HANNAM and Co.'s JUNE CIRCULAR. Investments may now be made on peculiarly favourable terms in Idaho and Nevada respectively, the richest gold and silver producing districts as yet discovered. The properties noted have been carefully selected and reported on by tried and well-known English agents, and will yield early returns.—Full particulars with JUNE CIRCULAR on application.

MISCELLANEOUS SHARES.—All investors with spare capital and capable of taking advantage of the opportunities afforded by a panic-stricken community, should make careful selections of shares now selling at far below their real value.

For particulars see HANNAM and Co.'s JUNE CIRCULAR, which may be had at either of their offices, 449, Strand, London, W.C., exactly opposite Charing-cross Station and Hotel, or at Royal Insurance Buildings, Manchester.

MR. J. N. MAUGHAN, STOCK AND SHAREBROKER
(Member of the Stock Exchange),
No. 2, COLLINGWOOD STREET, NEWCASTLE-ON-TYNE,
Bankers: Messrs. Lambton and Co.

MATTHEW FRANCIS, MINING ENGINEER,
DESIGNS MACHINERY FOR MINES, AND
LAYS OUT CHARTS FOR THE UNDERGROUND WORKINGS.

ADVISES as to the FUTURE of LODES from their nature and character, as seen in their surface indications, &c.

APPRAISES MINES by the VALUE of the ORE GROUND.

ADVISES as to the APPLICATION of the BEST and MOST MODERN COMBINATIONS of MACHINERY for the PURPOSES of DRAINING, WINDING, CRUSHING, and CLEANSING ORE.

He believes in mining as a certain and scientific pursuit, not as a lottery or enigmatical theorem depending on the chapter of accidents for success.

MATTHEW FRANCIS has worked a great number of mines to a profitable issue, frequently after they had been given up by his predecessors, or worked abortively—such as Wheal Carolina Copper, in Cornwall ; the Aroa Copper Mines, in Venezuela, now called the Quebrada ; the Logylas and Cwmystwith Lead Mines, and the Goginan, Darren, and other Silver-Lead Mines in Cardiganshire.

MATTHEW FRANCIS maintains that if mining be treated fairly, with sufficient capital, there is no branch of industry known that produces such large and steady profits on the outlay, as witness the continued prosperity of some of the largest mining houses, established for fully half a century.

Terms for inspection of mines or designing machinery moderate ; to be addressed, by note, to him at the MINING JOURNAL Office, 26, Fleet-street, London

---

MR. H. D. HOSKOLD,
MINING ENGINEER,
LAND AND MINERAL SURVEYOR
CINDERFORD, NEWNHAM.

Gentlemen requiring reliable and correct information respecting any Coal or Iron Mine Property in the Forest of Dean may obtain it on application.
Surveys, Plans, Reports, and Valuations on the usual moderate terms.

MR. THOMAS THOMAS,
ASSAYER, &c.,
COPPER ORE WHARVES, SWANSEA.

MR. M. MORGANS (late of the Brendon Hills Spathose Mines), CONSULTING ENGINEER, is prepared to REPORT on MINERAL PROPERTY, DESIGN and ESTIMATE for new ENGINEERING WORK, or to undertake the efficient working of MINES, ENGINES, PUMPS, &c., by periodical inspection, on moderate terms. Twenty-eight years' practical experience in managing large collieries and mines, railway construction, erecting mining machinery, rolling mills, furnaces, &c.

OFFICES,—MANSION HOUSE, OLD PARK, BRISTOL, and No. 15, HIGH STREET, NEWPORT, MONMOUTHSHIRE.

MR. J. S. MERRY,
ASSAYER AND ANALYTICAL CHEMIST,
SWANSEA.

MR. P. S. HAMILTON
MINING AND REAL ESTATE AGENT,
AND PRACTICAL GEOLOGIST,
OFFICE,—No. 72, GRANVILLE STREET, HALIFAX, NOVA SCOTIA.

N.B.—Sales and purchases of lands, quarries, and mining property negotiated upon the most advantageous terms, and with all possible dispatch. Explorations made or supervised, and reports prepared where required with the utmost care. Public attention is called to the fact that, owing to his experience as Gold Commissioner and Chief Commissioner of Mines, and as one who has been for years engaged in practical mining and geological explorations, Mr. HAMILTON has had opportunities which no other person has heretofore possessed of becoming intimately acquainted with the mineral resources of Nova Scotia.

TO ENTERPRISING CAPITALISTS.—A Gentleman, of great experience in a commercial point of view, having travelled the Globe over, and also purchased and shipped largely on his own account to Foreign Markets, discovered an ARTICLE of VAST CONSUMPTION, which will be a boon to the human race. A similar article has returned to the owners over two millions in a few years. In consequence of the unsettled state of the Money Market, since May, 1866, he has kept quiet, improving on the discovery, by sending samples to cold and warm climates, to test its preservation, and is now READY to TREAT with CAPITALISTS for a PORTION, and bring it before the public. He has the patronage of crowned heads, also the promises of large shipping orders. The strictest enquiries, with references, must be made on each side. To save trouble, none but *bona fide* parties, or their solicitors, will be treated with.

Apply, by letter only, addressed "Universal," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

Now in the Press.

A MINING ATLAS, DESIGNED TO CONVEY COMPLETE INFORMATION CONCERNING THE CHIEF MINING DISTRICTS IN GREAT BRITAIN AND THE UNITED STATES OF AMERICA.

BY THOMAS SPARGO,
GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

The work contains surface plans showing the geological formation of the various districts, and longitudinal and transverse sections of some of the most important mines in the United Kingdom, with observation upon their position, character, and working. Geological and parish maps of Cornwall, Devon, Cardiganshire, and the Isle of Man, showing height of hills, &c., have been prepared with the greatest care. Maps intended to illustrate the progress of mining in North America have been executed with great fulness and punctilious exactitude. A map of the United States and territories shows the divisions of each, with the mining districts of Nevada, Colorado, Idaho, New Mexico, Wisconsin, and the line of railways connecting the Atlantic and Pacific. Mr. Whitney, Commissioner for the Union to the Paris Exhibition, prepared a map of the great mining region of Colorado for the occasion, and has presented the plates to the author, for this work. A surface map of California shows the position of the mines in that great mining region.

The work will embrace explanatory notes, definitions, and illustrations of mining terms—such as shaft, level, cross-cut, sink, stope, end, rise, pitch, &c.
The work will contain upwards of fifty maps, plans, and sections.
Price, 10s. ; by post, 10s. 6d.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, c, Cheshire*	10 0 0	—		10 1 8	0 10 0	July 1868
200	Botallack, t, c, St. Just	91 5 0	200		488 15 0	5 0 0	May 1866
4000	Brookwood, c, Buckfastleigh	1 11 0	—		0 12 6	0 2 6	Aug. 1868
1000	Bronfloyd, l, Cardigan*	12 0 0	17½		10 7 0	0 6 0	Oct. 1868
5094	Bwlch Consols, s-l, Cardigan	4 0 0	—		0 5 0	0 5 0	June 1868
6400	Cashwell, l, Cumberland*	2 10 0	—	1¼	0 3 0	0 1 6	Aug. 1868
916	Cargoll, s-l, Newlyn	15 5 7	22		15 5 0	0 10 0	Oct. 1868
1280	Chanticleer, l,	0 7 8	—		0 1 0	0 0 6	Nov. 1868
2450	Cook's Kitchen, c, Illogan‡	19 14 9	14	13 14	1 12 0	0 5 0	Oct. 1868
509	Creegbrawse and Penkevil, t	—	—		2 5 0	1 5 0	April 1868
867	Cwm Erfin, l, Cardiganshire*	7 10 0	—		29 3 0	0 15 0	Oct. 1868
128	Cwmystwith, l, Cardiganshire	60 0 0	—		383 10 0	2 0 0	Aug. 1868
280	Derwent Mines, s-l, Durham	300 0 0	—		177 0 0	2 10 0	July 1868
1024	Devon Gt. Consols, c, Tavistock†	1 0 0	340	300 350	1120 0 0	5 0 0	Nov. 1868
656	Ding Dong, t, Gulval‡	49 14 6	50		0 10 0	0 10 0	Sept. 1867
358	Dolcoath, c, t, Camborne	128 17 6	400	400 420	864 10 0	7 0 0	Dec. 1868
6144	East Caradon, c, St. Cleer†	2 14 6	7½	8 8½	14 11 6	0 2 0	July 1867
300	East Darren, l, Cardiganshire	32 0 0	—		162 10 0	2 0 0	Nov. 1868
128	East Pool, t, c, Pool, Illogan	24 5 0	—		447 10 0	5 0 0	Nov. 1868
1906	East Wheal Lovell, t, Wendron	3 9 0	9½	9 9¼	4 1 6	0 10 0	May 1868
2800	Foxdale, l, Isle of Man*	25 0 0	—		72 0 0	0 10 0	Sept. 1868
5000	Frank Mills, l, Christow	3 18 6	3½	3 3½	3 5 6	0 5 0	Feb. 1866
3950	Gawton, c, Tavistock	3 10 6	—		0 3 0	0 3 0	Jan. 1868
15000	Great Laxey, l, Isle of Man*	4 0 0	21	19 20	9 15 0	0 10 0	Dec. 1868
5908	Great Wheal Vor, t, c, Helston†	40 0 0	11½	10 11	13 16 0	0 5 0	Dec. 1868
1024	Herodsfoot, l, near Liskeard†	8 10 0	45	42 44	48 0 0	1 10 0	Oct. 1868
165	Levant, c, t, St. Just	10 8 1	—		1095 0 0	2 0 0	July 1868
400	Lisburne, l, Cardiganshire	18 15 0	—		510 10 0	1 10 0	Nov. 1868
3000	Macs-y-Safn, l, Flint*	20 0 0	—		4 0 0	0 5 0	Oct. 1868
9000	Marke Valley, c, Caradon	4 10 6	8¾	8¾ 9	4 14 0	0 5 0	Oct. 1868
3000	Minera Boundary, l, Wrexham*	1 0 0	—		0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co., l, Wrexham*	25 0 0	—		243 13 6	4 0 0	Nov. 1868
20000	Mining Co. of Ireland, c, l, [illegible]	7 0 0	11¾	9¾	—	9 p.ct.	July 1868
40000	Mwyndy Iron Ore*†	3 5 0	—		0 8 6	0 2 0	Mar. 1868
200	Parys Mines, c, Anglesey*	50 0 0	—		162 10 0	2 10 0	Aug. 1868
12800	Prince of Wales, t, Calstock	0 12 6	24s.	22s. 24s.	0 8 6	0 1 0	Nov. 1868
1120	Providence, t, Uny Lelant†	10 6 7	35	33 35	86 12 6	1 0 0	Dec. 1868
512	South Caradon, c, St. Cleer†	1 5 0	350	340 360	602 10 0	5 0 0	Nov. 1868
6000	South Darren, l, Cardigan*	3 6 6	—		0 13 0	0 1 6	Aug. 1868
937	South Wh. Crofty, c, Illogan	24 10 10	—		1 0 0	0 10 0	Sept. 1868
496	So. Wh. Frances, c, Illog.†‡	18 18 9	—	13 15	374 13 6	1 0 0	Mar. 1868
508	Summer Hill, l, Mold	3 18 6	—		2 5 6	0 5 0	Feb. 1868
6000	Tincroft, c, t, Pool, Illogan†	9 0 0	18	17 18	20 1 0	0 5 0	Nov. 1868
2000	Trumpet Cons., t, Helston	11 10 0	—		13 1 0	0 10 0	Oct. 1868
3000	W. Chiverton, l, Perranzabuloe†	10 0 0	60	58 60	31 7 6	2 0 0	Nov. 1868
5000	West Godolphin, t, c, Breage	0 1 0	—		0 2 0	0 2 0	Dec. 1867
400	W. Wheal Seton, c, Camborne†	47 0 0	190	180 190	616 0 0	6 0 0	Dec. 1868
512	Wheal Basset, c, Illogan†	5 2 6	70	60 65	632 10 0	1 0 0	June 1868
1024	Wheal Friendship, c, Tavistock	20 0 0	—		300 10 0	0 10 0	Nov. 1866
512	Wheal Jane, s-l, Kea	10 15 0	—		21 0 0	2 0 0	Nov. 1868
4295	Wheal Kitty, t, St. Agnes	5 4 6	4⅛	4 4¼	3 11 0	0 2 0	Nov. 1868
1024	Wheal Mary Ann, l, Menheniot†	8 0 0	21	20 21	66 17 6	0 17 6	Dec. 1868
80	Wheal Owles, t, St. Just‡	70 0 0	—		350 13 0	7 10 0	Feb. 1868
396	Wheal Seton, t, c, Camborne	58 10 0	70	65 70	254 15 0	2 0 0	Feb. 1868
3000	Whitewell Lead, Clitheroe*	0 5 0	—		1 0 0	0 10 0	Dec. 1867
17000	Wicklow, c, t, Wicklow	2 10 0	11¾	11⅛ 11¼	49 1 0	0 5 0	Oct. 1868

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
35000	Alamillos, l, Spain*†	2 0 0	1¾	1¼ 1¾	0 4 6	0 2 0	Sept. 1868
20000	Australian, c, South Australia†‡	7 7 6	—		0 1 6	0 0 6	Aug. 1868
15000	Cape Copper Mining*†	7 0 0	13		3 17 6	0 15 0	Nov. 1868
30000	Central American Association*†	1 10 0	—	1½ 1¾	—	—	
76162	Don Pedro North del Rey*†‡	0 14 0	4	3⅝ 3⅞	1 0 3	0 3 6	Nov. 1868
70000	English and Australian, c‡	2 10 0	—		—	0 1 0	Feb. 1868
28000	Fortuna, l, Spain*†	2 0 0	—	1½ 2	1 11 10	0 2 6	Sept. 1868
20000	Gen.MiningAssoc., NovaScotia†	20 0 0	—		23 10 0	0 15 0	June 1867
10000	Gonnesa, l,*	5 0 0	—		10 per cent.		Aug. 1868
68000	Kapunda Mining Co., Austra†‡	1 0 0	—		0 1 10	0 0 6	Nov. 1868
15000	Linares, t, Spain*†	3 0 0	3	2½ 3	11 15 0	0 3 4	Sept. 1868
50000	Panulcillo, c, Chili*†	3 0 0	—	¾ 1¼	10 per cent.		Yearly.
6000	Peel River Land and Mineral*†	100 0 0	—		—	—	
10000	Pontgibaud, s-l, France†	20 0 0	12	10 12	5 6 2	0 19 7	Dec. 1868
100000	Port Phillip, g, Clunes†	1 0 0	2	1¾ 1⅞	1 3 0	0 1 0	Oct. 1868
120000	Scottish Australian Min. Co.†	1 0 0	1⅛	⅞ 1⅛	10 per cent.		Nov. 1868
11000	St. John del Rey, Brazil*†	15 0 0	15	15 15½	81 10 0	4 5 0	Dec. 1867
4000	Swedish Sulphur Ore*	2 10 0	—		7½ per cent.		Dec. 1868
13500	Vancouver Coal Mining*†‡	6 0 0	9	8 9	2 2 6	0 12 0	Nov. 1868
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 7	0 0 7	July 1868
40000	West Canada Mining Co.*	1 0 0	—		0 19 6	0 2 6	May 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
50000	Anglo-Argentine, s, Argentine Republic*	1 0 0	—	¾ 1	
100000	Anglo-Brazilian, g*†	0 10 0	—	⅜ ⅝	Nov. 1866
12500	Anglo-Italian, g*†	0 10 0	—	⅝ ⅞	Jan. 1868
20000	Australian United, g	1 0 0	—		Mar. 1868
2464	Burra Burra, c, South Australia‡	5 0 0	—		
20000	Capula, s, Mexico*†	1 17 6	1⅛		May 1868
30000	Chontales, g, s, Nicaragua*†	5 0 0	2¼	2⅛ 2⅜	Mar. 1868
12000	Cobre Copper Company, c, Cuba†‡*	45 10 0	—		Jan. 1868
10000	Copiapo Mining Company, Chili†‡	16 10 0	—		
10000	Copiapo Smelting, Chili*	10 0 0	—		April 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]				Nov. 1866
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, g, New Granada*†	1 17 6	½	8s. 10s.	May 1868
150000	General Brazilian*	0 2 0	¼	9s. 11s.	
80000	Great Northern, c, South Australia†	1 11 6	—		Sept. 1862
50000	Javali, g, Nicaragua	1 0 0	—		June 1868
7927	Lusitanian (Portugal)†‡	2 15 0	—		Dec. 1866
83640	Mariquita, g, s, New Granada	1 0 0	—		Feb. 1868
12500	Nerbudda Coal and Iron, India*†	6 0 0	—	4¼ 4¾	Dec. 1867
51000	New Quebrada, c, Venezuela*†	4 4 0	—		
15000	Otea, c, New Zealand*	2 0 0	—		Fully pd.
80000	Pestarena United, g, Italy*†	2 17 6	—	⅜ ⅝	
10178	Rhenish Consolidated, l [6000 £5 pd., 4178 £2 10s. pd.]		—		May 1866
100000	Rossa Grande, g, Brazil*†	0 14 0	1½	1¼ 1½	June 1867
15000	San Pedro del Monte, s, Mexico*	4 0 0	—		Sept. 1866
10000	San Roque, l, Spain	5 0 0	—		Fully pd.
10000	Sao Vicente, Brazil*†	1 0 0	1¾	3⅜ 3⅝	Oct. 1868
100000	Taquaril, g, Brazil*	0 7 6	½	11s. 13s.	Oct. 1868
43174	United Mexican, s, Mexico†‡*	28 5 2	2¼	1¾ 2	May 1868
30000	Val Antigoria, g, Italy*	1 2 6	—		
6000	Val Sassam, s, c, l, Italy*†	8 0 0	—		Aug. 1868
45000	Victor Emanuel, c, Italy*	1 0 0	—		Fully pd.
20000	Washoe, g, Nevada†	5 0 0	—		Fully pd.
80000	Worthing, c, South Australia*†	1 0 0	⅜	¼ ⅜	Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	—	¼ ½	Fully pd.
45000	Yudanamutana, c, South Australia*†‡	3 0 0	2¼	2 2¼	Fully pd.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
12000	Brynpostig, Montgomery, l*	1 0 0	—		
1000	Carn Brea, c, t, Illogan‡	30 0 0	25	20 22½	June 1868
3000	Chiverton, l, Perranzabuloe	11 0 0	4⅞	3 3½	Nov. 1868
3000	Chiverton Moor, l, Perranzabuloe	6 13 6	5¾	5½ 6	Nov. 1868
2880	Clifford Amalgamated, c, Gwennap‡	40 17 6	—		Oct. 1868
12800	Drake Walls, t, Calstock‡	2 5 0	1	¾ ⅞	Dec. 1866
512	East Basset, c, Redruth†‡	37 0 0	9	8 10	Nov. 1868
6000	East Carn Brea, c, Redruth‡	4 3 6	½		Dec. 1868
6000	East Grenville, c, Camborne	4 2 6	3⅜	3½ 3¾	Nov. 1868
4000	East Wheal Russell, c, Tavistock†	13 13 6	—		Oct. 1868
6144	Gonamena, c, St. Cleer	7 12 9	—		Dec. 1868
5000	Great North Downs, c, Redruth	6 13 0	—		Feb. 1867
4800	Great Retallack, s-l, b, Perranzabuloe	2 19 6	3	2¾ 3	Oct. 1868
5143	Great South Tolgus, c, Redruth	1 10 6	—		Dec. 1868
1798	Great Wheal Fortune, t, Breage	31 7 4	—		Mar. 1868
6000	Hingston Down, c, Calstock†	5 12 0	—		Dec. 1868
400	New Wheal Seton, c, Camborne	63 0 0	—	70 75	Jan. 1869
3457	North Downs, c, Redruth	5 8 10	—		Jan. 1868
695	North Roskear, c, Camborne	61 9 0	8	7½ 8	Nov. 1868
5936	North Treskerby, c, St. Agnes	1 12 4	⅝	17s. 19s.	Dec. 1860
3000	North Wheal Chiverton, l, Perranzabuloe	4 10 0	—		Nov. 1868
1024	Rose and Chiverton United, l, Newlyn	6 0 0	—		Aug. 1868
6138	South Condurrow, t, c, Camborne	4 8 6	1	¾ ⅞	Oct. 1868
1000	South Merllyn, l, Flint	1 0 0	—	19s. 21s.	
940	St. Ives Consols, t, St. Ives‡	10 15 0	—	11 12	Nov. 1867
920	Stray Park, c, t, Camborne†‡	45 5 8	5½	3 5	April 1868
548	Trelyon Consols, t, St. Ives	16 10 0	—		Dec. 1868
1000	West Basset, c, Illogan†‡	2 0 0	—		May 1868
1024	West Caradon, c, St. Cleer†‡	25 0 0	3½	2½ 3	Nov. 1868
12800	West Drake Walls, c, Calstock	0 6 0	—	5s. 7s.	Nov. 1868
2582	West Great Work, t, Breage	5 11 0	2½		June 1866
6000	West St. Ives, t, c, St. Ives	0 3 6	—		Oct. 1868
512	West Wheal Frances, t, Illogan	106 15 0	42½	44 42	
5000	West Wheal Kitty, t, St. Agnes	3 4 0	—		Nov. 1868
6000	Wheal Agar, c, Illogan	7 13 0	—		Oct. 1868
512	Wheal Buller, c, Redruth†‡	28 5 0	7	7½ 10	Nov. 1868
811	Wheal Emily Henrietta, c, Illogan	20 0 0	20	19 21	Jan. 1868
5724	Wheal Grenville, c, Camborne†	10 10 0	1⅝	34s. 36s.	Dec. 1868
1040	Wheal Trelawny, s-l, Liskeard†	10 7 0	7	7 8	Dec. 1867
5000	Wheal Uny, t, c, Redruth	10 14 6	4⅛	3⅝ 3⅞	Oct. 1868

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done
4000	[illegible]acorkish, I. of Man, l, c*	4 0 0	—	
4000	BedfordConsols, c, Tavistock	3 0 6	—	
4000	Bedford United, c, Tavist.*	2 17 8	2⅛	
1248	Boscaswell, t, c, St. Just	7 6 0	—	
5000	Bottle Hill, t, Plympton	1 14 6	—	
5000	Bryn Gwiog, l, Flint	0 18 0	—	
1200	Bryn Gwyn, l, Mold*‡	9 0 0	—	
7500	Brynystwith, l*	0 10 0	—	
1000	Budnick Consols, c	2 5 0	—	
6000	Bwadrain Cons., s-l, Cardig.	3 2 0	—	
30000	Caldbeck Fells, l, Cumberld.*	1 15 0	½	10s. 11s.
1000	Camborne Consols, c	11 10 0	—	
11000	CapeCornwall, t, c* [8000 £2 10s. pd., 3000 25s. pd.]			
5000	Capel Banhaglog, l, Mont.*	1 10 0	—	
914	Caradon Consols, c, St. Cleer	32 13 6	—	
1000	Cardynham China-clay*	3 0 0	—	
6000	Carn Camborne, c, Cambrn.	2 0 0	—	
2000	Carnmarth Granite Co.*	—	—	
20000	Carysfort [3200 £2½ pd., 16800 £1 ½ pd.]			
2500	Central Minera, l, Wrexham*	3 1 6	—	
16000	Central Snailbeach l*	1 0 0	—	
3000	Chiverton Valley, l, Perranz.	2 0 0	—	
2048	Colquite & Callington Un., c.	1 8 0	3⅛	3 3¼
256	Condurrow, c, t, Camborne‡	76 10 0	2½	2 2½
50000	Connorree, c, s-l, Wicklow*	1 0 0	—	
983	Copper Hill, c, Redruth‡	12 10 0	—	
1000	Cornwall Hematite Co.*	5 0 0	—	
1055	Craddock Moor, c, St. Cleer‡	14 0 0	—	
12000	Crelake, c, Tavistock	3 12 0	—	
6000	Cuddra, t, St. Austell	5 10 0	—	
300	Cwm Daren, Cardigan*	—		20
740	Eaglebrook, l, Talybont*	19 15 0	—	
1000	East Basset and Grylls, t	3 5 0	—	
4000	East Chiverton, l, Perranz.	3 4 9	—	
4000	E. Gunnislake & S. Bed. c.	11 1 6	—	1½ 1¾
6000	East Laxey, l, Isle of Man	3 0 0	—	
4096	E. New Wh. Lovell, t, Wend.	0 5 0	⅜	¼ ½
5000	E. Rosewarne, c, t, Gwinear	2 19 0	—	
6000	East Snaefell, l, I. of Man*	3 0 0	—	
5610	East Seton, c, Camborne	0 16 6	—	
2000	East Trumpet	1 10 0	—	
1190	E. Wh. Agar, c, St. Cleer	12 17 0	—	1¾ 2
6000	East Wheal Reeth, Lelant	—	—	
5000	E. Wh. Rose Con., l, Per.*	2 10 0	—	
6000	Ebury Lead Min. Co., Flint*	1 15 0	—	
1026	Garden, c, Morvah	6 15 3	—	
6000	Gen. Min. Co. for Ireland, c.	5 10 0	—	
40000	Glasgow Caradon, c* [30,000 £1 p., 10,000 15s. p.]			
10000	Glan Alun, l, Mold*	0 12 0	⅝	12s. 14s.
5700	Goginan, Cardigan, l	12 10 0	—	
6000	Gothic, s-l, Cardigan*	2 10 0	—	
486	Grambler & St. Aubyn, c†‡	74 0 0	—	
10000	Great Cwmsymlog, s-l*	1 15 0	—	
4096	Great Caradon, c, St. Ive	4 3 0	—	
12500	Gt.No.Laxey(Isle of Man)*	1 0 0	—	¼ ½
6000	Great N. Tolgus, c, Illogan	1 0 0	¼	⅝ ⅞
15000	Great Rhosesmor, l	5 0 0	—	
6000	Gt.S.Chiverton, s-l, Perranz	1 18 6	—	
6000	Great Western, t	2 0 0	—	
3313	Gt.Wh.Baddern, t, Devoran	7 17 6	2⅜	2¼ 2½
119	Great Work, t, Germoe	100 0 0	—	
10240	Gunnislake (Clitters'), t, c.	4 19 0	—	
6068	Gwydyr Park, l, Llanrwst	1 11 0	—	
6400	Harwood, l, Durham*	0 7 6	—	
1019	Leeds and St. Aubyn, t, c	19 13 4	—	
1000	Llywernog, l, Cardiganshire	12 10 0	—	
5120	Lovell Consols, Wendron, t.	0 6 0	—	
6000	Maudlin, c, Lostwithiel	4 7 0	—	
6000	Mid-Wales, l,*	2 10 0	—	3 3½
1000	Montgomeryshire, l, b*	3 0 0	—	
640	Mount Pleasant, l, Mold	4 0 0	—	
1024	Nangiles, t, c, Kea	32 10 0	—	
1500	New Chiverton, l, Perranz.	0 17 0	7	9 10
6000	New Clifford, c., Gwennap*	3 0 0	—	
6400	N. Crow Hill, l, St. Stephen.	3 6 6	3½	
6514	New E. Russell, c, Tavistock	0 12 6	—	
20000	New Gt. Cons., c, Tavistock*	1 0 0	—	
6400	New Pembroke, St. Blaz. t, c	1 12 0	—	
3680	New Treleigh, c, Redruth	—	—	
6000	New Westminster, l	6 0 0	—	
4096	New Wh. Lovell, t, Wendron	1 19 6	—	
2000	N. Wh. Towan, c, t, Wendron	1 10 0	1¾	2⅛ 2⅜
5000	No. Dolcoath, c, Camborne	4 3 0	—	
1361	No. Grambler, c, Redruth	9 3 9	—	
6000	North Jane, t, s-l, Kenwyn	3 4 6	—	
2000	North Levant, t, c, St. Just	10 12 0	—	¼ ⅜
4000	No. Phœnix, c, Linkinhorne	4 11 0	11	10½ 11
3240	North Pool, c, Illogan	6 3 6	—	
1024	No.Retallack, c, Perrazabuloe	2 0 0	—	
6000	North Wheal Basset, c, t†	5 0 0	—	
5610	N. Wh. Crofty, c, Illogan†	3 11 3	—	
12288	Okel Tor, c, Calstock	2 7 4	1⅜	1¼ 1⅜
8000	Old Gunnislake, c, Calstock	3 9 6	—	
6400	Par Consols, c, St. Blazey†‡	2 14 6	—	
5754	Pedn-an-drea, t, Redruth	7 18 0	—	
5000	Pendeen Consols, c, St. Just	7 5 0	—	5 6
4000	Penhale United, s-l, Perran.*	2 15 0	—	
2177	Penhale Wh.Vor, t, c, Breage	6 2 6	—	
5000	Penhalls, t, St. Agnes	3 0 0	—	
1772	Polberro, t, St. Agnes	15 0 0	4¼	4 4½
6000	Prosper U., t, c, St. Hilary	9 14 0	1	
4620	Redmoor, c, t, Callington	1 19 6	—	
6000	Reinnie Laxey, l, I. of Man*	4 10 0	—	
3000	Rhydtalog, s-l, Cardigan	0 5 0	—	
6000	Roaring Water, c*	2 15 0	—	
2000	Rosecliff and Tolcarne, l*	9 15 0	—	
5915	Rosewall Hill & Ransom, c.	3 10 0	1	1¼ 1⅝
10000	Royalton, t, St. Columb	1 1 0	1¾	
20500	Snaefell, l, Isle of Man*	1 0 0	—	12s. 14s.
512	South Basset, c, Gwennap	30 10 0	—	
3000	So. Chiverton, s, l, Perranz.	6 2 6	—	
3000	So. Fowey, c, Tywardreath	1 0 0	—	
5000	So. Gt. Work, t, c, St. Hilary	0 3 6	—	
3395	So. Herodsfoot, l, Liskeard	4 10 0	—	
30210	South of Scotland, c*t	1 0 0	—	
2739	South Trevenna, c,	2 10 0	—	
6000	South Wheal Grenville, t, c.	1 5 6	—	
400	So. Wh. Seton, c, Camborne	83 13 0	—	
236	Spearne Consols, t, St. Just	4 4 4	—	
242	Spearne Moor, t, St. Just	6 2 0	—	
673	St. Ives Wh. Allen, t, St. Ives	18 18 7	—	
8771	St. Just Amalg., t,* [6000 £3 10s. pd., 2771 £2 5s. pd.			
300	Steeple Aston Iron Ore Co.	7 0 0	—	
7000	Stiperstones, l, Salop*	5 10 0	—	
6000	TamarValley, s-l, Beeralston	0 14 0	1	
3500	Tin Hill, t, St. Austell	1 12 6	—	
501	Tresavean and Trethurrup	16 11 0	—	
4096	Trewetha, s-l, Menheniot	10 19 6	—	
1943	Treworlis, t, Wendron	11 15 4	—	
4200	Vigra and Clogau, c, Dolg.*‡	5 10 0	—	
256	West Damsel, c, Gwennap	38 10 0	—	
12000	W. Maria & Fortes., c, Lam.	3 13 0	—	
12800	West Prince of Wales, c	0 11 0	—	
1000	West Rose Down, c, Linking.	22 0 0	—	
512	West Tolgus, c, Redruth	62 0 0	—	
4096	W. Wh. Tremayne, St. Erth	0 12 0	—	
741	Wheal Basset and Grylls, t	7 18 6	—	
6000	Wheal Crebor, c, Tavistock	2 9 0	⅜	6s. 8s.
4000	Wh. Emma, c, Buckfastleigh	3 19 0	—	
1560	Wheal Falmouth & Sperries	9 1 0	—	
6000	Wheal Ida, s-l, St. Ive	1 6 6	—	⅛ ¼
1024	Wh. Kitty, t, Uny Lelant†	3 10 6	6	5½ 6½
896	Wh. Margaret, t, Uny Le.‡	13 17 6	—	5 5¼
728	Wheal Margery, St. Ives, t, c	27 4 0	—	
6000	Wheal Mary Florence, c*	2 6 0	—	
1000	Wh.MaryHutchins, c, Plymp.	2 0 6	—	
2000	Wheal Rose, c, Scorrier	1 0 0	—	
4663	Wheal Sparnon, c	3 17 0	—	
1920	Wh. Trannack, c, Sithney	1 13 3	—	
1200	Wheal Trevenna, t, c*	10 0 0	—	

IRON AND COAL COMPANIES.

100	Bolckow, Vaughan, and Co.*	30 0 0	4½ 5	pm.
100	Charles Cammell and Co.*	80 0 0	3[illegible] 32	dis.
32	Ebbw Vale Iron Co.*	27 10 0	12¼ 12¾	dis.
15	Hopkins, Gilkes, and Co.*	10 0 0	5½ 4½	dis.
100	John Brown and Co.*	70 0 0	25 23	dis.
12½	Mersey Steel and Iron Co.*	11 10 0	8½ —	dis.
10	Midland Iron Company*	5 0 0	6½ 7	pm.
100	Parkgate Iron Company*	57 10 0	36 34	dis.
50	Rhymney Iron Company	50 0 0	18½ 19½	dis.
15	Ditto, New	15 0 0	5½ 6	dis.
50	Shotts Iron Company	50 0 0	19 —	dis.
100	Thames Iron Company*	100 0 0	70 —	dis.
20	Patent Shaft & Axletree Co.*	10 0 0	4⅞ —	pm.
100	Sheepbridge Coal & Iron Co.*	50 0 0	25 26	dis.
100	Staveley Coal and Iron Co.*	60 0 0	27 28	pm.
35	Palmer's Shpbldg.&Iron Co.*	25 0 0	7½ 7	dis.
10	Consett Iron Company*	7 10 0	1 1¼	pm.

b, blende; *cl* coal; *c*, copper; *g*, gold; *l*, lead; *s*, silver; *sl*, slate; *sl*, silver-lead; *t*, tin; *z*, zinc.

, Companies marked thus * have been incorporated with Limited Liability; those marked † have been admitted on the Stock Exchange, those marked thus ‡ have paid Dividends.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their office, 26, FLEET STREET, E.C., where all communications are requested to be addressed.—*January* 9, 1869.